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In the pre-kindergarten classroom, the young child develops positive attitudes toward school, adults, and fellow classmates. These are the foundational learnings upon which rest his future attitudes toward education and society. Among the important goals of a pre-kindergarten program are the broadening of intellectual horizons, the stimulation of curiosity, and the acquisition of information about the world in which the child lives. Another major goal for the child's emotional health is the development of self-confidence, self-understanding, and a good self-image. For children from disadvantaged areas this is particularly important. A pre-kindergarten program also aims to help children acquire skills of observation, investigation, and critical thinking. Emphasis is placed on improving oral language of non-English speaking and disadvantaged children. Aesthetic appreciation and self-expression are stimulated through art, music, dancing, and literature, moral and spiritual values are developed as the child learns to accept external controls, exercise self-control, recognize the rights of others, and grow in independence and a sense of responsibility.

To aid the teacher in fulfilling the goals of a pre-kindergarten program, curriculum materials are presented in the following areas: art experiences, language and literature, music sensitivity, health and safety standards, social studies concepts, the world of science, and mathematical concepts. In each category, numerous learning experiences are described with instructions for student participation and teaching techiques. Ideas for creating an environment for learning in the classroom and for planning the school day are also included.

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Dr. Jim Wrightstone
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PRE-KINDERGARTEN CURRICULUM

BOARD OF EDUCATION OF THE CITY OF NEW YORK

DIVISION OF ELEMENTARY SCHOOLS
Bureau of Early Childhood Education

DIVISION OF CURRICULUM DEVELOPMENT
Bureau of Curriculum Research

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FOREWORD

The opportunity furnished New York City to help young children grow physically, intellectually and spiritually through experiences in pre-kindergarten classes is a happy one. It provides possibilities that have long been hoped for by parents and professional.

The experimental work which is now under way gives an opportunity to observe and evaluate activities and programs on a broad basis.

This is the first time that so many pre-kindergarten children will have had a beginning school experience of this type. It is also the first time that so many teachers and supervisors will be working with these children.

These pre-kindergarten curriculum materials, therefore, represent an experimental venture. They reflect both the experiences of early childhood teachers, supervisors and curriculum workers, and teachers who are completing their first assignments to pre-kindergarten classes. Revisions will be taking place as teachers learn more about these children, how they learn and what experiences are most fruitful in working with them.

JOSEPH O. LORETAN
Deputy Superintendent

April 2, 1965

INTRODUCTION

This bulletin is intended to serve as a guide for teachers working in the newly-established pre-kindergarten classes. Inherent in the curriculum is the recognition that young children differ in many respects and that they come to the pre-kindergarten class with certain strengths and weaknesses based upon their out-of-school experiences. The teacher plans a program that capitalizes on the child's strengths and his positive experiences. She provides activities and instruction that compensate for an experiential background lacking quantity or quality. Specific suggestions are made in the bulletin for developing the basic intellectual and social skills with provision for adaptation to particular situations.

The developmental program provides a continuing sequence of learnings begun in the pre-kindergarten class. No one experience is sufficient for development of a concept. Experiences through which the child may apply, evaluate and extend his knowledge are a significant part of the program. It is the teacher, who through her skill in observing the child and discerning his needs and abilities, plans suitable experiences and provides materials to stimulate his emerging interests and to help in clarifying his concepts of the world about him.

It is anticipated that with an improved self-image, with increasing language facility, and with the nurturing of intellectual growth, the child will develop positive attitudes toward school, learning and society.

The bulletin will serve as a resource in the in-service training of pre-kindergarten teachers. Consultant help to both teachers and administrators will also be an integral part of the program.

Truda T. Weil
Acting Associate Superintendent
Division of Elementary Schools

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Acknowledgments

This material was prepared by the Bureau of Early Childhood Education, Rebecca A. Winton, Director, under the direction of Truda T. Weil, Acting Associate Superintendent of the Division of Elementary Schools with the cooperation of the Bureau of Curriculum Research, William H. Bristow, Director.

At the request of Deputy Superintendent Joseph O. Loretan, first steps to carry out the pre-kindergarten program of the Board of Education were taken in a summer workshop conducted under the auspices of the Curriculum Bureau during 1964. Involved in the workshop were Elvira B. Goldfield and Laura R. Schneider, pre-kindergarten teachers working under the direction of Rebecca A Winton, Director and Bernice H. Fleiss, formerly Assistant Director of the Bureau of Early Childhood Education. Blanche O. Persky, Professor of Education, New York University, Elizabeth C. Gilkerson and Charlotte B. Winsor, Bank Street College of Education serves as consultants.

The present draft was prepared by Ruth M. Baylor of the Bureau of Early Childhood Education in cooperation with staff members of the Bureau of Curriculum Research.

At a meeting arranged by Deputy Superintendent Joseph O. Loretan many constructive suggestions were made for developing appropriate programs for young children from all levels of environmental background, with amphasis on a pre-kindergarten program for those in disadvantaged neighborhoods. Thanks are extended to Millie Almy and Kenneth D. Wann of Teachers College, Columbia University, Martin Deutsch of the Institute for Developmental Studies, New York Medical College; Andrew Gleason of Harvard University, Susan Gray of Peabody College for Teachers; Herbert Karplus of the University of California, and Patrick Suppes of Stanford University.

To the teachers to whom this draft will be submitted for experimentation, evaluation and further suggestions goes appreciation in anticipation of their usual wholehearted cooperation in making this experimental document into a functioning curriculum.

Curriculum materials in their respective fields of specialization were prepared by Olive L. Riley, Director, Bureau of Art, Laura K. Eads, Research Associate Bureau of Curriculum Research (Mathematics); Harry Milgrom Assistant Director, Bureau of Science Education, Julius Schwartz and Muriel Green, Science Consultants, Bureau of Curriculum Research, and Alice Harwood, Assistant Director of the Bureau of Early Childhood, who assisted in the area of science; Dorothy Pugliese, Supervisor, and Peter J. Wilhousky, Director, of Music.

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DEVELOPING A PROGRAM FOR THE PRE-KINDERGARTEN CHILD

Understanding the Pre-Kindergarten Child

Although each child is unique, child development studies have shown that there are similarities in children's growth patterns. Each child passes through the same successive stages of growth in very much the same sequence, but not necessarily in the same length of time. The same child may progress rapidly in one phase of his development yet progress more slowly in another aspect. A knowledge of the characteristics that children have in common as well as their individual differences guides the teacher in planning the program, in selecting suitable learning activities, and in appraising progress.

	The Child	The Teacher
Physical Development	Is active and alert. Enjoys vigorous play. Is developing muscular coordination.	Provides space and equipment, indoors and outdoors, for large muscle activity.
	Tires easily.	Includes daily rest period. Provides snack to renew energy.
	Can sit still for only a very short time.	Supplies a variety of activities alternating quiet and active periods; plans short activities.
	Begins to develop small muscle control.	Provides opportunities to use beads, puzzles, pegs, and scissors.
	Is usually far-sighted.	Avoids an abundance of close-up, small work. Provides good lighting.
	Catches cold easily. Is susceptible to communicable diseases.	Has daily inspection. Isolates or sends home child who shows symptoms of illness. Encourages good hygiene practices.
Social Development	Likes companionship of peers but finds it difficult to share; prefers to play next to rather than with other children.	Supplies duplicates of items such as toy telephones, stethoscopes etc.; permits child to play alone or with others.
	Enjoys talking with adult or is learning to enjoy it.	Takes time to listen and to engage in conversation.
	Takes pleasure in dramatic play.	Makes available simple props and materials such as large squares of fabric which can be used for various play purposes.
	Often quarrels and shows aggression in play with peers. Uses socially disapproved expressions.	Praises desirable behavior and language. Offers alternative ways of meeting and expressing frustrations.
	Is developing feelings of independence. Resists regulations which limit his activity.	Provides opportunities for choice of activities. Clarifies need to conform to certain regulations, particularly those concerned with health and safety.
	Is ego-centered. Seeks praise and approval.	Establishes warm, supportive relationships. Accepts child as he is.
Intellectual Development	Shows curiosity by asking many questions.	Gives honest answers in simple form.

	The Child	The Teacher
	Often uses poor judgment because of limited perception of space, weight, etc.	Prevents accidents by setting limits such as height to which blocks may be stacked. Provides many experiences to help child improve his perceptual skills.
	Likes to manipulate and experiment with concrete materials.	Provides a variety of manipulative materials and freedom to experiment with them.
	Enjoys imaginative play. Likes pantomime.	Reads stories about talking animals. Encourages dramatization.
	Is constantly developing new concepts.	Provides new experiences and related vocabulary as the child shows readiness.
	Becomes more skillful in using an increased vocabulary.	Gives opportunity for discussion and conversation. Introduces new words in connection with activities and experiences.
	Has short attention span.	At first plans short learning periods, to be lengthened as child's attention span grows.
	Enjoys listening to stories and rhymes, looking at pictures and joining the teacher as she repeats appealing refrains.	Plans a daily story time, provides colorful picture books and encourages participation.
	If Non-English speaking or from disadvantaged environment, need additional help in language development.	Gives special help by supplying the needed word, by providing supportive, encouraging assistance in communication.(See Chapter: Fostering Language Development.)
Emotional Development.	Needs a feeling of belonging.	Establishes a warm, accepting, happy classroom. Provides a cubby for his clothing, etc. Gives opportunity for child to participate in many activities.
	Can understand when something is funny.	Develops sense of humor in child by joining in laughter and by using stories and verses that are humorous.
	Has fears such as darkness, loud noises etc.	Reassures and comforts child. Encourages child to talk about and resolve fears. Tells or reads stories related to subject.
	Needs to feel secure.	Provides classroom routines and sets understandable limits. Gives help if needed. Is consistent in what she says.
	Needs a good self-image, especially if from disadvantaged environment.	Shows she likes child and wants him in the class. Praises him in front of his peers. Is friendly to his mother and/or father. Gives individual attention.

Setting The Goals

"Play is the highest phase of child development for it is a self-active representation of the inner spirit...from inner necessity and impulse."

Friedrich Froebel

In the informal, friendly atmosphere of the pre-kindergarten classroom the young child develops positive attitudes to school, to the adults with whom he comes in contact there and to his classmates. These are the foundational learnings upon which rest his future attitudes toward education and society.

The initial concern of the school is for the young child's health and physical growth and for development of motor and manipulative skills.

For the child's emotional health, it is necessary that he develop self-confidence, self-understanding and a good self-image. This is a major goal of the program, which needs to be implemented particularly for children from disadvantaged areas.

An acceptance of children of different backgrounds and an ability to adapt to differences in surroundings is fostered in the classroom.

Important goals are the broadening of intellectual horizons, the stimulation of curiosity and the acquisition of information about the world in which the child lives.

The program aims to help children acquire skills of observation, investigation, and critical thinking. Emphasis is placed on improving the child's oral language with special concern for the language development of Non-English speaking children and children from disadvantaged areas.

Aesthetic appreciation and self-expression are stimulated through art, music, dancing and literature.

Moral and spiritual values are developed as the child is helped to accept external controls, exercise self-control, recognize the rights of others and grow in independence and a sense of responsibility.

Creating an Environment for Learning

The school environment plays a significant role in achieving the goals of the pre-kindergarten program. The physical environment and emotional climate both influence what and how the child learns. The total number of children in the class and the pupil-teacher ratio have a direct bearing on the extent to which the teacher and teacher-assistant can discover a child's needs and interests, give him opportunities for self-expression and individualize learning.

Emotional Climate

The emotional climate reflects the teacher's ready acceptance of the various cultures represented in today's pre-kindergarten classroom. Many of the children are lacking in background experiences and have difficulty in communicating. Others in the same room have had many basic, supportive experiences and are relatively skillful with words. The teacher appreciates the uniqueness of each child.

The pre-kindergarten program provides an environment in which children learn through exploration and investigation. The climate of the classroom encourages children to be free to ask questions, and to seek answers both independently and with the help of the teacher. "Concepts cannot be learned by rote or by mere instruction. They must be experienced, directly sensed and tested to be understood."[1]

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1. New York State Council for Children, Good Living for Young Children, [illegible].1960

A sound, stimulating program that satisfies and challenges children according to their individual capacities presents a minimum of "control" problems. The teacher plans so that children are gainfully occupied and involved throughout the day.

Along with the concept of freedom goes the recognition that quiet children must be encouraged to participate. Such encouragement is not by pressure, but is based on an understanding of the child's personality and his particular reason for passivity.

It must at the same time be recognized that children need the consistency and the security of controls that clearly define the limits for individuals and for the group. Every group is different, and each teacher is sensitive to the needs of the individual children involved. Yet the group is an entity and the teacher plans for it to function as such.

Limits and controls vary for individual children as well as for the group, but the underlying principle is that there should be reasonable, well established rules that children can understand and that provide the security of knowing that adults are there to be helpful and supportive. They are consistent and yet flexible, depending on variations in circumstances. Flexibility, however, does not imply vacillation. In particular, rules or limits related to safety and health remain constant.

In order for children to feel the security that comes from reasonable consistent limits, there should be a maximum of opportunities for children to feel comfortable and free to explore materials and relationships, to satisfy curiosity, to discover and practice skills and develop competencies with a minimum of restrictions.

Value of Play

The teacher is aware that play is a primary channel of learning for the young child. She observes the child at play, stimulating and guiding him toward further exploration, discovery, and learning. She plans the classroom environment with a heightened awareness of the learning potentials of play materials and activities.

In an environment in which they are encouraged to move freely, children have opportunity to develop motor and manipulative skills. Since the young child is active by nature, sufficient space is needed, both indoors and outdoors, so that he may release his energies and tensions as well as develop muscular coordination.

Although certain group learnings are worth while for all children, the teacher realizes that structured group activity is not suitable for young children for long periods of time. Individual differences in attention span, need for activity and differences in interests make it unwise to emphasize group activity to any considerable degree. The child is at first concerned largely with himself, his desires and his interests. Only gradually, with the teacher's help, does he become aware of himself as a member of the group.

Room Arrangement

The arrangement of the equipment and materials in the room affects, in large measure, how comfortably and effectively the children can work and play. The flexibility of moveable furniture and cupboards makes it possible to arrange and rearrange the room to utilize it to best advantage, depending upon the activity. Placement of furniture should allow for quiet, cozy corners as well as for open areas for active play.

Centers of Interest

In order to facilitate choice of activity, to provide comfortable working areas and to lessen distracting influences, the teacher arranges the equipment to provide centers of interest. These centers, such as block area, science corner etc., invite the child to participate spontaneously in activities that are sources of learning as well as fun for him.

Block Area

It is important that the space designated for block play be sufficiently large to accomodate a small group of children and that it be away from doors and lanes of traffic in the room. Both hollow blocks and unit blocks are provided. They afford the child not only physical activity but experiences with space and distance relationships, size, weight and number. Unit blocks should be stacked

according to size, with unit, double unit and quadruple unit blocks occupying separate sections of the block cabinets.

While creating in the block area children are encouraged to express certain simple quantitative and mathematical relationships. They use the words more, bigger, higher, taller, wide, narrow and flat.

When children work together and try to solve problems, they learn to cooperate with their peers as well as to communicate through language. The teacher encourages the children's attempts at problem solving by subtle questions, by eliciting individual and group evaluations and by providing suitable accessory materials such as toy cars, traffic signals and wedgie figures to be used with the blocks.

Doll Corner

Materials and arrangement of the doll corner present many opportunities for the child to understand his role and to appreciate his place in his school and home environment. In addition to the basic furniture provided for the housekeeping area, play is enriched by the use of full length and hand mirrors. Dolls suggesting several racial backgrounds are made available. Grown-up clothing, costumes, a toy stethoscope, nurse's cap, jewelry, feathers, an old safety razor without a blade and pocketbooks are items that help children in their dramatic play.

Social language develops in the doll corner as children pretend to be various members of the family, use toy telephones, dramtize home life. The teacher is at hand to supply new words and to clarify meanings. The dramatic play in the doll corner helps the child organize and understand what he sees and hears in the world about him.

Art Center

In setting up a center for painting, the teacher sees that easel, paints, brushes and aprons of some sort are easily accessible. If possible, activity involving easel painting should be situated near the sink, or water for use in painting as well as for cleaning up may be provided in pails and pitchers.

Since art activities provide opportunity for the child to express his feelings and ideas, the teacher provides art materials in substantial quantities and in sufficient varieties. Children may choose clay, dough, poster paints, finger paints, construction paper, scissors, paste, collage materials, crayon or chalk through which to express themselves. For some children this may be a first step in self-expression and communication.

Sand Table and Water Play Center

In addition to the sand and water, the teacher provides transparent cups, various kinds of plastic containers, pails, measuring spoons, funnels, straws and eggbeaters. As he uses these materials, the child is learning the properties of sand and water. He enjoys the concrete experiences with weight, quantity and capacity. Words that express sensory experiences of texture, temperature, quantity and weight become part of the child's imaginative play with sand and water.

Library Corner

A quiet, well-lighted spot with many picture books attractively displayed on low shelves encourages the children to become acquainted with books. If a few chairs are arranged around a center table in the corner, children have space to open and enjoy a favorite picture book at various times during the day. It is the teacher's responsibility to keep the books in good repair as they become soiled or torn from much use. Opportunity is also afforded for children to learn the proper care and handling of books.

Books are chosen to provide variety as well as appeal. While some books will be selected for their imaginative content, those that help to foster a child's self image will include a diversity of environmental background with which the child can identify. Teacher-made materials and collections of pictures supplement tradebooks.

Science Corner

Science learnings are inherent in many materials and activities of the pre-kindergarten program, such as the use of musical instruments, balancing building blocks and in considering the everyday phenomena of weather, air, water and animals. In addition the teacher provides an accessible shelf, table or cabinet to house materials such as magnets, magnifying glasses, color paddles and simple collections of things such as rocks, shells, leaves, wheels etc. The children need time and freedom to observe, touch and use the materials. The teacher provides information and helps children in their observation of science phenomena.

The living things in the pre-kindergarten classroom often seem to be the first objects to stimulate spontaneous questions from the children. Fish, turtles, hamsters and plants stimulate the young child's curiosity and powers of observation.

The Community as an Extension of the School Environment

Much of the content of the school curriculum utilizes the neighborhood and its resources for learning. These resources include the simple familiar things that may be observed in a walk around the block e.g. the stores, the shopkeeper, the traffic signals, the mail boxes etc. In some parts of the city, children may see boats, trains and bridges. Places where the essentials of living are manufactured or repaired are always of interest to children. These will include such places as the bakery, shoemaker, lumber yard and construction sites. The children's room of the public library may be visited. People in the community provide a rich resource in terms of human relationships as well as information. If there are parents in the group who can make a particular contribution, they should be encouraged to do so. It is important to build up the concept of the policeman as a friend. The work of the fireman, the postman and the sanitation worker should become familiar to the group. The alert teacher will find many opportunities for learning as she encourages children to observe and to respond to their environment.

Trips

Trips inside the school building as well as those out in the community further implement the formation of concepts. Trips offer first-hand experiences in observing how people work and live in the school and in the neighborhood and how the physical world affects people who live in it.

Children who have not left their home neighborhood have limited experiences from which to build vocabulary. Walking trips or excursions by bus provide many opportunities for children to develop concepts and to verbalize them. Successful trips require pre-planning with the children as well as ample time, even days later, for interpretation of what was seen.

Routines

There should be careful planning for group living in the classroom. Repeated patterns of action help children to feel secure, to know what is expected of them, to achieve some control over their environment, and to develop independence and responsibility. Routines which occur in regular daily patterns help children to develop a sense of time, sequence, and order in their daily schedule. Routines can be used as a vehicle for intellectual learnings. For example, children learn to associate their cubbies with specific symbol, shape or color.

Routines should be introduced by the teacher through both visual and verbal methods. In the beginning, demonstration of acting out of routines by the teacher or a child with a minimum of oral directions is recommended. The teacher needs sensitivity and patience to insure success for the children during the early days of the year. Once the routines are firmly established, it is important to help the group see the possibility for variation. For example, "How can we dry our hands without towels?" Once routines are well established, variety helps provide fresh challenge and builds habits of attention. Varied routines teach children that there are many appropriate ways of doing things.

One way for the teacher to provide possibilities for developing concepts is to plan routines carefully. The routines established in the pre-kindergarten are particularly meaningful to children who come to school with a relatively poor sense of time and order.

Good Housekeeping

Constructive and creative play is invited by an attractively decorated, neat and orderly room. Mounted pictures are placed low enough so that they are on the child's eye level. As soon as possible, children's work is displayed around the room. The color scheme provides brightness and balance. As the year goes on, the teacher involves the children in bringing to school pictures, plants or other objects of interest. Attractive orderliness without clutter is the teacher's objective.

Good housekeeping is as important as good routines in freeing the child to get the greatest value from his school experiences. If in the doll corner, the dishes are merely thrown into a box, valuable learnings of classification and orderliness are lost. Frustrations mount as the child searches for the object he wants.

When pride in the appearance of the room and the school is evidenced by the teacher's attention to cleanliness, decoration and good housekeeping procedures, the children tend to follow her example. In no way does this hamper the children's freedom in using the equipment. It does insure that children will grow in responsibility in caring for equipment and that more children will be able to use the materials with less frustration.

Quantity of Equipment

In setting up the room, the teacher plans carefully for the kind and amount of equipment that is available for children's use at any one time. Although it is unwise to put out too many pieces of equipment at one time, there should be sufficient variety to meet the different interests and ability levels of the group. The teacher is sensitive to the fact that each item of equipment has a range of possibilities for each child and does not pressure for conformity or for a set standard of usage.

New Materials

As the teacher observes each child in his use of materials, she may gather clues for removing some pieces of equipment or for introducing others. The introduction of new materials proceeds gradually and as the need arises. Often the physical rearrangement of equipment will encourage new approaches to materials.

Initial Adjustment to School

Four year olds who have not had prior group experience need time to adjust to group living. It is recommended that a small number of children (7) be admitted to school on the first day and that 2 additional children to be admitted each day thereafter until the entire group of a maximum of 15 is together. Parents should be asked to remain in the building on the first day of their children's attendance. Those parents whose children show a great deal of anxiety at the time of separation should be asked to remain in the classroom. It may be necessary for these parents to stay in the classroom with their children for several days until the children begin to adjust and feel comfortable and secure in the group.

The equipment for the first week of school should be simple and carefully chosen. The doll corner should be set up with its basic equipment of refrigerator, stove, sink, doll bed, doll carriage, ironing board, table and four chairs and shelf space. A small number of well selected accessory materials, such as dishes, silverware, one or two pots and pans, a tea kettle, and two dolls should be included. A small selection of easily managed dress-up clothes, such as a man's and lady's hat, woman's handbag, man's wallet, scarfs and gloves should be provided.

A separate cubby for the child's belongings is essential for developing a feeling of worth and pride of possession. There should be a symbol, easily recognized by the child, as well as his name (for the teacher to read) to identify his cubby and his own things.

Crayons and paper for drawing should be set out.

The book corner should include simple, attractive books which the children may look at as they sit on mats on the floor or in the library corner.

Manipulative equipment such as beads, pegs, one piece puzzles, color cone, color cubes, nesting boxes and nesting cups should be neatly arranged on the shelves for children to use.

Planning the Day

Use of Time

Although the day is carefully planned and follows a schedule, each group's daily schedule varies according to group and individual needs. The teacher also makes use of unplanned events as they arise. This necessitates keeping the program flexible in order to take advantage of all possibilities. Developing a sense of sequence through activities that occur in a regular daily pattern helps children to build time concepts.

The work-play period constitutes the largest single block of time during the school day. It encompasses current and long-range interests, makes provision for individual needs and affords opportunities for developing individual abilities and interests. Clean-up time, with its attendant development of habits of independence, responsibility and order, is included in the work-play period.

Balance in the Program

Since young children need ample time and space for free, vigorous large muscle activity, provision is made for both indoor and outdoor activities. The outdoor play area includes equipment such as climbing apparatus, hollow blocks, play boards, ropes, pails, assorted boxes, wagons, balls, hoops etc. In an all day program additional equipment and facilities are essential in order to meet the physical needs of young children. A daily outdoor play period, when weather permits, in all seasons of the year, is an essential part of the all day program.

Balancing the program also calls for time spent on trips. Neighborhood walks or carefully planned bus trips have value for the opportunity they afford for physical movement as well as for their intrinsic learning possibilities. Such activities need not be planned for each day but they should be part of long range planning for the school year. The trips should be simple and not fatiguing, but their importance should not be minimized.

Even in a two hour school day there are times when children need to rest. This relaxation may be achieved through the careful planning of alternate active and quiet periods. There are children, however, who need to relax completely at intervals during the day. The provision the teacher makes for such need may take the form of either stretching out on floor mats in a darkened, well-ventilated room or sitting quietly on a mat while listening to music or to a story, the form that rest takes is less important than the fact that the teacher is aware of the need and provides the opportunity.

Teacher Assistants

When there are other adults present to assist the teachers, they should be involved in the planning and preparation of the day's activities. A short informal chat, before the children arrive, between the teacher and the assistant teacher, prepares the volunteer or student teacher so that she can more readily enter into the spirit of the program. The teacher alerts her assistant teacher to certain children's special needs, to the experiences planned for the day and to the materials that will be needed. The assistant may have special talents which may be used to enrich the program. It is helpful if she is made aware of the sequence of daily routines so that she is ready to aid the transition from one activity to the next. If special events such as trips or parties are planned, the day will go more smoothly if the assistant is informed beforehand of the plan.

Sample Daily Schedules
Two Hour Session
(Exclusive of Arrival and Dismissal Time)

A.M.		P.M.
8:40	Arrival, greeting, undressing, informal conversation.	12:30
8:55	Discussion (group time for those children who are ready for group participation).	12:45
9:10	Free play and use of materials and equipment. Opportunity for experiences in art, science, music, mathematics, social studies. Clean up.	1:00
9:55	Toileting and washing (may be done in two groups with aid of volunteer assistant or student teacher).	1:45
10:05	Snack and conversation.	1:55
10:15	Story and/or poetry.	2:05
10:30	Songs, rhythms, games, trips (indoors or outdoors). When trips of longer duration are planned, the teacher arranges her program to provide the needed flexibility.	2:20
10:55	Dressing (less time is needed in summer).	2:45
11:10	Dismissal,	3:00

Full Day Session

8:40 A.M.	Arrival, greeting, undressing, informal conversation.
8:55	Discussion (group time for those children who are ready for large group participation).
9:05	Free play and use of materials and equipment. Opportunity for experiences in art, science, music, mathematics, social studies. Clean up.
10:05	Toileting and washing.
10:15	Snack and conversation.
10:30	Story and/or poetry.
10:45	Songs, rhythms, games, trips (indoors or outdoors). For longer trips, rearrange program to provide flexibility.
11:45	Preparation for lunch. Children should be involved in this preparation. At this time children also help to set up the cots for rest time.
12:05 P.M.	Lunch.
12:35	Rest or sleep. The teacher provides for children who have difficulty sleeping by having picture books for them to look at, records for quiet listening or stories read to individual children.
1:35	Put away cots.
1:50	Music: songs, rhythm instruments, rhythms.
2:05	Snack and conversation.
2:20	Dressing and outdoor play or large muscle activity indoors in inclement weather.
3:00	Dismissal.

Evaluating Progress

The teacher's understanding of the child grows as she observes records, and compares evidences of each child's progress. A small memorandum book or 3" x 5" file cards help the teacher to jot down brief comments on incidents and behaviors that she observes during the day. Such accounts should be factual and objective. They should not include opinion or interpretation.

Periodically these notes should be reviewed for evidence of patterns of behavior and learning. It is helpful to keep a check list of activities in which children have participated and the materials they have used. Such records need not become burdensome if they are kept brief and simple.

Samples of children's handwork, accumulated over a period of time, also serve as a means of evaluating a child's growth in artistic or creative expression.

The information supplied by these records helps the teacher evaluate the child's individual achievement, growth and development. It may also be used by the teacher to evaluate her own methods.

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ORGANIZATIONS CONCERNED WITH EARLY CHILDHOOD EDUCATION

National

Association for Childhood Education Int.
3615 Wisconsin Ave., Washington, D.C. 20016

Child Study Association of America
9 East 89 Street, New York, N.Y. 10028

National Association for
the Education of Young Children
155 East Ohio Street
Chicago, Illinois

Local

Association for Childhood Education,
Metropolitan
110 Livingston Street, Brooklyn, N.Y.
11201

Early Childhood Education Council of
New York City
51 West 4 Street, New York, N.Y. 10012

New York Public School Early Childhood
Association
110 Livingston Street
Brooklyn, N. Y. 11201

Play Schools Association
120 West 57 St., New York, N.Y. 10019

Engaging In Art Experiences

"Until quite recently, the early years of children's art development were not considered important by either teachers or parents. The child's efforts were looked upon only as daubs of paint or shapeless masses of clay. It was thought that the young child could acquire nothing of basic art concepts or skills. His teaching, therefore, was left to those who had little or no experience in the arts. As a result of extensive study, this attitude has completely changed and the ages from three to five years are recognized as one of the most vital and fruitful periods in the creative development of the individual."

Jane Cooper Bland
ART OF THE YOUNG CHILD
Museum of Modern Art Publication

The development of basic art concepts is not the result of directed learning; rather, concepts are formed as children explore the use of materials and as the teacher, through comments and questions, helps them become more sensitive to qualitie and characteristics of art media.

For the pre-kindergarten child the development of basic art concepts start through direct acquaintance with two and three-dimensional materials. Essentially basic art concepts grow from:

WHAT THE EYE SEES

Size and size relationships: large; small; larger; smaller; big; little; bigger; smaller; tiny.

Shape and form relationships: round; square; high; higher; tall; taller; wide; wider; narrow; flat.

Color and color relationships: hue; bright; dull; dark; shiny.

Space and space relationships: solid; hollow; open; closed; inside; outside; wide; narrow.

WHAT THE EYE SEES AND THE HANDS MAY FEEL

Texture: rough; smooth; slippery; bumpier; sticky.

Form and space relationships: solid; thick; thin; hollow; open; closed; inside; outside; under; above; structure; function.

The processes of seeing, remembering, and naming elements in the child's visual world expand slowly. The teacher stimulates these processes through questioning and through drawing the child's attention to things in his immediate environment.

"See what a pretty red coat Mary has." "Can you put your rubbers inside your cubby?" "Show me which wooden bead is round." "Which is square; which one has a hole inside?"

In the arts, the uniqueness of the child is valued. The twin strengths of a sympathetic teacher and a stimulating atmosphere encourage the pre-kindergarten child to explore materials and to discover what he can do with them. Art experiences even at the very early levels, give the child a sense of expressing something that he feels within himself. The results of his efforts, no matter how childish, give him a feeling of satisfaction and self-reliance on his own choice and judgment.

The average child's progress in art will be consonant with his natural stages of mental, emotional, and manipulative development. The culturally-deprived child, however, is often seriously handicapped. His home environment generally limits his opportunities for verbal inter-communication and deprives him of enriching experience that could challenge his imagination and curiosity. For many of these children, art may become, for the time being, their most direct and gratifying form of expressing their ideas and feelings. The teacher will need to judge each child's readiness for new media and new experiences in terms of his accomplishments, his interest span, and his imagination, his ingenuity, and his self-reliance. They will help her guide the child toward further exploration, discovery, and learning.

STAGES OF GROWTH IN ART EXPERIENCES

Drawing and Painting

1. Exploratory: Pokes at paper with crayon or brush, creates random series of dots and lines. Creates tangle of lines and shapes. Interested in physical activity more than result.

2. Intuitive Design: Creates lines and shapes that tend toward a spiral or circular configuration. May add extending lines. Sometimes identifies parts of a drawing or painting.

3. Intended Design: May repeat symbols. Lines and shapes become clearer. May attempt to draw or paint identifiable symbols (person, car, house). Adds lines, shapes, and colors to make his intent clearer. Tries to clarify real or imagined subject matter by adding meaningful details (rays of sun, fingers on hands, chimney on house, wheels on car).

Modeling

1. Exploratory: Manipulates dough. Rolls, squeezes, pounds, smooths, pinches and shapes in a variety of ways. Senses its pliability. Discovers the many ways dough, clay or papier-mache can be shaped by hands and fingers. Makes simple structure by sticking small objects such as sticks, straws, buttons into the soft base.

2. Intuitive Design: Shapes dough and clay into simple three-dimensional non-realistic forms. Combines shapes. Uses improvised instruments to vary surface of materials.

3. Intended Design: Clarifies forms to create an intended subject (a man, a lion, a boat, a basket). Tries to clarify a real or imagined subject by adding meaningful details (hair on head, long tail, smoke-stack, little egg-shape forms).

Working with Paper

1. Exploratory: Tries out different ways in which paper can be cut and folded and possibly twisted into shapes.

2. Intuitive Design: Selects materials he likes from a small collection. Cuts or tears and arranges pieces on a background. Moves shapes around until satisfied. Makes the arrangement more permanent. Tries out decorating arrangements for headbands, masks, and hats.

3. Intended Design: Starts with an idea of what he wants to make. Objects may be practical or decorative. Selects materials freely and talks about what he is making. Selects from a variety of materials to make the basic part of the object, then adds whatever he wishes as ornamentation.

Block Building

1. Manipulative and Exploratory: Senses the nature of blocks - their solidity, weight, size, shape. Discovers what can be done by touching, lifting, pushing and piling them.

2. Intuitive Design: Combines various sizes and shapes, making linear, wall, and floor-type structures. Is generally willing to share blocks.

3. Intended Design: Arranges and combines blocks to build open and related structures. Finds ways to bridge structures. Reinforces functions of structures with toys. Finds new ways to balance structures.

Constructing with Wood and Other Materials

1. Exploratory: Experiments with a few pieces of wood that he selects from a small assortment. Makes trial arrangements on a limited flat surface. Tries built-up forms, arranging and re-arranging them. May name an object.

2. Intuitive Design:	Learns to use hammer and nails, and to glue parts together. Has clearer ideas about what he is making. Becomes more experimental in combining forms. If he wishes, may paint his construction.
3. Intended Design:	Starts with the idea of making a certain object, such as a train or boat. May select additional small objects to make his idea clearer.

Puppetry

1. Manipulative:	Discovers how a simple fist puppet can be made and used to express ideas and feelings through play acting.
2. Intuitive Design:	Makes a paper bag puppet, the character of which will be determined through added design elements.
3. Intended Design:	Selects a drawing recognizable to the child and converts it to a puppet character. Uses the puppets for an inter-change of dialogue.

Opportunities for art experiences in a variety of materials should be available to all children as part of "free play" activities. Drawing, painting, block building, puppet making, modeling, designing and constructing in two and three-dimensional materials should be provided.

The child may work alone or in groups of two-three, or four, depending on his stage of social development. The teacher encourages the children by favorable comments, and, through questioning, helps them make their own choices and decisions.

"Which colors do you want to use?" "Where are you going to put this pretty large shape of paper?" "See how carefully John is using the paste."

PRACTICAL ARRANGEMENTS

The art corner should have easels, with a supply table near at hand. Painting experiences may be carried out on tables (finger painting, sponge painting, and brush painting, for example) as well as on easels when the child has demonstrated ability to handle paint and large brushes.

Children may observe or assist in the preparation of dough, self-hardening papier-mache, mixed tempera paints, and clay.

Other art materials may be sorted into boxes or clear plastic bags in such a way that the teacher can make an assortment available to small groups of children.

Materials to protect tables and children's clothing should be provided, as well as clean-up facilities.

DRAWING

EXPERIENCE	THE TEACHER	THE CHILD
Introduction to drawing	Introduces crayons and provides several opportunities for experimentation.	Selects colors and experiments with materials.
Materials		
Assorted 4" wax crayons Cray-Pas; Felt-Riter marking pens; Manila paper (assorted sizes); newsprint; colored construction paper.	Demonstrates using flat side of crayon as well as point of crayon.	Responds to teacher's encouragement by increased variety of ideas and symbols in drawing.
	When child begins to name scribble, questions may clarify his idea about the subject of the drawing.	
	Directs observation of environment.	After child is familiar with suggested materials, he may combine materials in a single drawing.
	Encourages use of a variety of colors, not necessarily in realistic fashion.	
	Introduces Cray-Pas and felt pens in a similar manner.	
	Studies individual children's sequence of drawing to assess his emotional, mental, and physical development.	
	Invites children to talk about their drawings.	

PAINTING:

EXPERIENCE	THE TEACHER	THE CHILDREN
Finger painting	Shows how to wet paper with moist sponge.	Moistens paper. Selects a color; places a teaspoon of paint on paper. Spreads paint; freely moves fingers and hands to create rhythmic patterns.
Materials		
Finger paints and finger painting paper, sponge, container of water.	Places a teaspoon of paint on paper.	
	Guides child to spread paint over paper surface.	
	Encourages child to use all part of hands to make a "design" on the paper.	
	Discusses the use of two or three colors.	Selects two colors; moistens paper; spreads colors. Some children may discover how to keep each color bright, as well as to produce mixed colors.
	Talks about color names, light and dark colors, happy and sad colors.	
	Encourages experimentation with two colors.	
Sponge painting	Shows how to dip and squeeze sponge.	Uses wet sponge freely over dry surface. Develops some control over movement and moisture.
Making shapes with sponge and water at chalkboard or blackboard easel.	Suggests making designs that "disappear."	
Materials		
Sponges Container of water.	Encourages high and wide body movements.	Responds with freer and more varied movements of hand, arm, and body.

EXPERIENCE	THE TEACHER	THE CHILD
Sponge painting on paper.	Shows how to dip sponge in paint. Encourages child to experiment with sponge and paint on paper.	Selects one color of paint. Uses sponge to make shapes on paper.
Materials		
Sponge, tempera paint, newsprint.	Talks about children's work, commenting on quality of shapes and textures.	
	Suggests that children now use more than one color.	Using sponges and colors freely (a sponge for each color) further experiments are made.
Water painting	Shows how to dip brush in water and remove excess liquid.	Paints with water. Gains some ability to handle liquid media in an upright position. Paints lines and shapes.
Materials	Encourages child to use free-hand, arm, and body movements when painting.	
1" bristle brush, container of water, chalkboard or blackboard easel (sponge for cleaning up.)		
Painting with one color	Shows how to dip brush in paint and remove excess.	Selects one color. Experiments with brush and paint. Begins to get control of medium. Often paints tangle of lines and shapes. Often paints out his first painting.
Materials	Guides child to discover what he can make the brush do.	
Painting with two, three, or more colors	Shows the routines of using more than one color: one brush for each color.	Paints lines, shapes, patterns, symbolic images in two or more colors.
Materials	Encourages those who wish to use more than one color.	Increases in skill and tries for a greater variety of shapes.
Tempera paint: yellow, or orange, red, blue, green, violet, black; 1" bristle brush; newsprint paper.	Notes the child's stage of development: ability to control paint; duration of interest; quality of imagery; guides with problem-solving questions.	Finds pleasure in combining colors.
Observing color mixing experiments	Shows what happens when a primary color is added to white paint.	Observes color changes Names colors.
Materials		
Tempera paint: white, black and primary colors; plastic paint cups and covers; paper; brushes.	Discusses color changes. Later on, shows what happens when a little black is added to a color.	Continues painting experiences in accordance with ability and stage of development.
	Invites children to combine light colors and dark colors with primary colors.	
	Makes a wide range of pure and mixed colors available.	

MODELING

EXPERIENCE	THE TEACHER	THE CHILD
Making and manipulating dough.	Involves children in measuring and mixing ingredient for dough.	Participates in measuring and mixing dough concrete experience with number concepts: one, two, three and measurement concepts: cupful, half-cup, etc.

EXPERIENCE	THE TEACHER	THE CHILD
Materials Measuring cups; flour; salt; vegetable food coloring (optional); plastic bags for storing dough.	Invites the child to experiment with a convenient share of the material.	Enjoys physical activity as he pounds, pokes, pats, and rolls dough.
Playing with dough Materials Flour and salt dough; assorted cookie cutters; small column blocks for rolling pin; assorted small objects, such as buttons, pegs, beads, pipe cleaners, toothpicks, plastic straws.	Encourages experimentation with a lump of dough about the size of a lemon. Shows use of cylinder to roll dough and cookie forms to cut dough. Shows assorted small objects and invites child to incorporate objects in his dough.	Squeezes, smooths, pinches, and shapes, dough. Presses cookie cutter into dough. Selects objects to stick into soft dough form. At times builds up dough form. May model and put together simple forms as: cakes balls, and coils.
Modeling in clay and papier-mache (self-hardening clay). Materials Moist clay, white ceramic clay or instant papier-mache (self-hardening clay). Improvised tools, such as hair pins, keys, paper clips; clay boards; moist sponges; paper towels.	Invites child to experiment with a lump of clay about the size of an orange. After child has used fingers for experimentation, introduces improvised tools.	Experiments with clay; squeezing, rolling, etc. Builds up forms and pulls out forms. Pokes holes into clay forms. Uses fingers and tools to make surface marks on clay.
Modeling in clay and papier-mache (self-hardening clay) Materials Same as previous experience. Assorted small objects, such as feathers, straws, toothpicks and beads	Gives child a lump of clay and suggests that he keep clay in one piece while experimenting with it. (Child may accept or ignore this suggestion). Encourages child to make a shape he has never seen before. Introduces small objects for decorating forms or clarifying ideas.	Manipulates clay. Discovers that he can make new and different forms. Names created forms. Adds various small objects to enhance his form.
Painting a dry clay form Materials Tempera paint (a little thinner than usual) in assorted colors in small covered containers; small brushes.	Allows modeled forms to dry thoroughly. May provide thinned tempera paint so that the child may color his clay object. May show the child how to use paint (a little paint on the brush, paint slowly and carefully.	Decides on the colors he wishes to use and paints his object as he wishes.

WORKING WITH PAPER

EXPERIENCE	THE TEACHER	THE CHILD
Learning to use scissors	Shows child how to handle scissors correctly.	Experiments using scissors and paper.

EXPERIENCE	THE TEACHER	THE CHILD
Materials Scissors; assorted colored papers; light weight fabrics may be included.	Encourages experimentation. Shows the possibilities of folding the paper and cutting into the fold; shows cutting freely to make a curved or spiral shape; shows fringing.	After gaining some skill may explore fringing, cutting on fold; cutting through three or four folds of paper; freely cutting a curve or spiral.
Making a collage (flat design made by assembling and pasting on a flat surface other flat materials, such as papers, textiles, and found material.)	Invites child to select from a collection of papers and fabrics. Suggests that he arrange them on a piece of colored paper. Introduces "treasure box" materials.	Selects papers and fabrics. May cut or tear pieces; may also use "found" shapes of scrap materials. Tries out piece on a background paper.
Materials Background paper; variety of scrap papers, fabrics; "treasure box" of trimmings, such as beads, buttons, baking cups; paste, scissors.	Reminds child of the best way to paste or glue down materials. Encourages child to collect materials for future collage activities.	Pastes or glues shapes to background paper. In future experiences may add a variety of small objects to collage. May add folded, fringed or twisted paper shapes. May attach created three-dimensional paper form he has made.
Creating paper decorations, play hats and masks. Materials "Treasure box"; construction paper paper bags; paper plates; adhesive; paper clips; scissors; stapler.	Makes a band to fit a child's head size. Encourages child to decorate band by pasting on it a variety of paper and trimmings. Assists child in fastening band. May suggest a paper bag, plate or cone of construction paper for future experiences in decorating a play hat. Creative masks may be made by using paper bags and plates as base for imaginative decorations.	Selects materials. Cuts and pastes. Practices skills learned in previous experiences to create new shapes and forms. May invent extending forms to fasten to his headband. Pastes or clips forms to headband.
Making structures out of paper boxes Materials Cardboard boxes and small cartons, such as egg-boxes and shoe boxes. Corrugated paper and scrap materials, paint, brushes, all-purpose glue.	Encourages child to discover ways in which cardboard boxes may be arranged to form structures. Guides child to manipulate materials before deciding upon final arrangement. Shows child how to glue forms. Encourages the child to decorate structure through the use of paint and scrap materials.	Selects a few cardboard shapes; experiments in arranging these forms; makes created form permanent by gluing parts. Adds paint, paper, or other materials to decorate structures or clarify idea. May identify structure as a house, boat or simply as a "design."
Creating wind toys and shapes that move.	Shows child how paper shape may be tied to a string.	Cuts and folds paper to create a shape that will move in a current of air.

EXPERIENCE	THE TEACHER	THE CHILD
Materials Assorted paper, including corrugated paper and construction paper. Scissors; plastic or paper straws; cord or yarn.	Suggests use as a toy or decoration. Encourages child to cut a large shape that will catch a current of air. Assists child in fastening a string to shape. Hangs shapes where movement and color can be enjoyed.	Attaches string to shape. Plays with created toy.
	BUILDING WITH BLOCKS	
Individual free play with blocks	Introduces children to the block corner and shows how blocks of the same size are stored together.	Piles block on block, changes the structure, moves block around on floor. May think of what he has "built" as train, boat, house. The child may add small objects to the arrangement.
Block building together	Encourages a few children to build at the same time. Allows children time before putting blocks away to talk about their buildings. Encourages different kinds of structures.	Builds more imaginatively and handles a greater variety of blocks. Talks about imaginary structures in relation to what has been built.
Cooperative planning and building. **Materials** Blocks and imaginatively related materials.	Encourages the child to invite others to build with him. Comments favorably on group and individual efforts. Indicates interest in children's ideas.	Children start with an idea in mind that develops as they build. They become aware of size, shape, and weight of blocks, and more sensitive to physical and visual balance. Mathematical relationships and space relationships become part of their ideas for building. Functions become clarified through the use of small toys.

CONSTRUCTING WITH WOOD AND OTHER MATERIALS

EXPERIENCE	THE TEACHER	THE CHILD
The child experiments with the arrangement of a variety of small wooden shapes. A metal tray or box top will contain the materials and set limits for the construction. **Materials** Small wooden forms, tray or box for each child.	Guides the child to select a few pieces of wood in a variety of shapes and sizes. Encourages experimentation in arranging these shapes. Encourages the building up of balanced forms.	Selects from a small variety of wooden forms. Arranges forms on a tray or box top. Tries building up forms. May discover likeness to a real object. May name the object.

EXPERIENCE	THE TEACHER	THE CHILD
Hammering and nailing Materials Child-sized hammer, assorted small pieces of soft pine or balsa wood, 1" and 1/2" thick (hard wood, not suitable), flat-headed nails, white liquid all-purpose glue	Demonstrates safe use of tools: hold nail in place, taps nail with hammer to set, removes hand from nail and holds wood securely, drives nail into wood with light taps.	Takes his turn in nailing under supervision. Continues nailing on his own, improving in skill.
Child experiments in creating a simple construction. He fastens the pieces together with nails or glue.	Encourages the child to experiment with arrangements before making it permanent. Tells the child he may use either hammer and nails or glue to join parts. Demonstrates use of glue: applies glue to surfaces; holds shapes firmly together until glue is set.	Selects from a wider range of materials. Experiments with his construction, exchanging parts until he is satisfied. May use hammer and nails and/or glue. May add flat color and patterned color areas.
The child creates an imaginative structure or an object, such as a boat or train. Materials Add to collection: other wooden shapes and found objects.	Reviews safe way of using tools and glue. Encourages child to build construction upward. Guides child to view work from all sides.	Collects small objects to be used in new constructions. Arranges and re-arranges pieces. Decides to make last arrangement permanent. Uses nails and glue. May add parts that can move.

MAKING AND USING PUPPETS

EXPERIENCE	THE TEACHER	THE CHILD
Makes and uses a simple cloth puppet	Covers fist with cloth to form a puppet head; holds cloth at wrist; cuts holes in cloth; puts finger or fingers through holes, suggesting rabbit's ears, elephant's trunk or bird's beak. Animates puppet by moving fingers and hand. Shows materials that may be used for features and costumes.	Covers fist with cloth to suggest puppet head May cut holes to let finger or fingers through. Animates puppet; plays with it; talks to and for it. May draw features or other details; may glue on yarn or trimmings to suggest a costume.
Creating puppets from a sock or a mitten Materials Socks; mittens; Cloth: yarns, trimmings; all-purpose glue; crayons or felt-riter pens.	Introduces idea of creating a puppet by placing sock or mitten over head. Encourages experimentation with suggested materials to make a real or imagined puppet character.	Puts sock or mitten over hand; manipulates fingers, animates form May cut holes to allow fingers to protrude. Adds details to make his idea clear. Engages in dramatic play with animal or figure created.
Making a paper bag puppet	Shows child how to fill paper bag with crushed newspaper to form head of person or creature.	Forms large ball of newspaper. Stuffs paper bag. Accepts teacher help in tying bag to stick.

EXPERIENCE	THE TEACHER	THE CHILD
Materials Tempera paints; brushes; assorted trimmings; all-purpose glue; bags; newspaper; dowel stick or cardboard tube made of tightly rolled construction paper.	Ties open end of bag over stick. Guides child to add decorations to the form and consider ideas for his own paper bag puppet.	Decorates the form with paint and trimmings to clarify his idea.
Making stick puppets **Materials** Tempera paints and brushes or crayons. Paper, scissors staples, sticks or tongue depressors.	Plans activity when child's drawings or paintings show identifiable symbols. Shows how child's drawings of people objects or animals may be cut out. Staples cut-out symbol to stick.	Draws or paints an identifiable symbol. Cuts out the symbol. Accepts help of teacher in stapling paper symbol to stick. May turn puppet and decorate reverse side of symbol.
	Guides child to animate stick. Encourages child to speak for his puppet.	Gives life to his puppet by animating and talking to and for it.

ART MATERIALS

1. Drawing:

   large colored and black crayons; cray-pas; colored chalks; magic markers, all colors; newsprint; manila paper; construction paper.

2. Painting:

   finger paint, all colors; tempera paint, all colors, small capped containers for paint; wide bristle brushes; sponges; newsprint; manila paper; plastic iced-tea-spoons; container for water; paper towels; newspaper.

3. Modeling:

   dough; self-hardening papier-mache; self-hardening clay; ceramic clay; clay board; plastic forks and spoons; assorted sizes of wooden sticks; small column block for rolling pin; small cookie cutters; air-tight plastic bags.

4. Working with Paper and Other Materials:

   colored papers of various types; small cardboard boxes; assorted flat materials suitable for collage, such as simply patterned gift wrapping paper, scraps of fabric; rounded-edge scissors, paste.

5. Building with Blocks:

   standard blocks recommended by the Director of Early Childhood Education.

6. Constructing with Wood and Other Materials:

   manipulative toys; assorted small ready-cut wooden forms, such as wooden beads, pegs, sticks, wood craft parts for art work; found objects, such as spools, plastic boxes, cardboard and wooden boxes; metal tray or box top; hammer, nails, white liquid all-purpose glue, tempera paints, brushes.

7. Making Puppets:
   crayons; drawing paper; straws; tongue depressors; large paper bags, squares of cloth.

III

FOSTERING GROWTH IN LANGUAGE

Basic to the success of the pre-kindergarten program is the facility of communication and expression which children must acquire. Those children particularly whose home environment reflects a paucity of conversation or the use of a foreign language need a program which fosters verbalization.

Our culture demands the ability to use the spoken and written word for success in basic social relationships as well as for school learning and adult accomplishment.

The pre-kindergarten teacher provides an environment that is conducive to child growth and development. She recognizes the importance of language in helping the child to explore his environment, understand his relation to it and express his thoughts and feelings about it.

The teacher accepts the language the child brings from home and gradually, without stifling his initiative and spontaneity, helps him to acquire a larger vocabulary and facility in expressing himself.

She provides a classroom environment in which the child is:

Emotionally secure. The teacher shows an interest in each child that helps him to establish a warm personal relationship with her. He feels wanted and accepted by her and comfortable with his classmates.

Intellectually stimulated. The child's curiosity and interest are aroused by a variety of materials, equipment, and learning experiences appropriate to his level of development.

Self-motivated and directed. The child is free to select an activity in which he is personally interested and to try to resolve any problems posed by the activity. Frequently, a child's most vivid perceptions, discoveries, and memories are associated with self-selected activities. In these activities the teacher is available and helpful,observant but not intrusive.

Teacher-motivated and guided. The child is encouraged to join a small group in order to participate in a game, a song, a rhyme, the enjoyment of a picture or a story, or some other experience in listening, observing, and speaking.

Exposed to language. The child develops interest and skill in understanding the language of others and in using language to express his own ideas and feelings adequately.

As the child responds to his environment, the teacher guides and assists him by supplying suitable material, responding to his questions, listening to his explanation and stimulating his creative thinking, providing vocabulary and language structure to help him express himself. Through this guidance, assistance and support she enriches experiences for him by helping him to develop and broaden concepts, develop new insights, and enrich his vocabulary. She leads him to a better understanding of the experience and stimulates him to undertake new experiences. By arranging not only individual experiences but also small group activities the teacher helps the child relate consciously to other children and provides him with a learning situation in which he might not engage if left to himself.

NOTE: THE TEACHER IS NOT EXPECTED TO USE THIS EXACT LANGUAGE NOR ARE THE EXPERIENCES SUGGESTED THROUGHOUT THIS BULLETIN COMPREHENSIVE. MANY OF THESE ACTIVITIES ARE ON-GOING AND NEED REPETITION. THE EXPERIENCES ARE MERELY SUGGESTIVE. THEY MAY BE USED WITH INDIVIDUAL CHILDREN OR WITH A SMALL GROUP, RARELY WITH A LARGE GROUP.

EXPERIENCES TO DEVELOP LISTENING SKILLS
(with related verbalization)

Functional Listening

The teacher utilizes actual situations in the classroom, school, and community to provide the motivation and experiences for functional listening. Because many young children are non-verbal in varying degrees when they enter the

pre-kindergarten, the teacher uses gestures, facial expression, tone of voice, demonstration, etc. to help the child make the transition from non-verbal to verbal expression and understanding. At the beginning of the term, therefore, she often shows as well as tells what to do in the ordinary daily classroom routines.

	The Teacher	The Children
Listening in New Firsthand Experiences	Uses experience with school bell and gong signals having functional significance, e.g., fire drill gong.	Learn that school bells and gongs have a meaning. Listen attentively.
	Reassures children as to meaning of gongs and bells.	Lose fear of gongs.
	Shows and tells children what to do when gong rings for fire-drill.	Can identify bells, gongs. Respond in accord with teacher's explanation and demonstration.
Listening to Directions	Gives direction where immediate response is expected.	Listen attentively.
	Gives <u>one</u> direction and demonstrates response expected, e.g., "Carry your chair this way."	Understand what they are supposed to do. Follow direction and act out as given.
	Gives <u>two</u> related or consecutive directions with immediate response expected, e.g., "Take a mat. Sit on it near me."	Listen to teacher's words, watch her demonstration and follow the directions.
	Gives <u>series</u> of simple consecutive directions one at a time and waits for response before giving next direction, e.g. "Take off your hat and coat. Put your hat in your coat sleeve (demonstrates). Hang your coat on a hook." Awaits children's reaction. Assists if help is needed.	Listen consciously to find out what to do. Try to follow each direction as given.
Listening for Answer	Takes time to answer questions of individual children.	Wait for answer to own question, e.g. "When may I paint?"
	Answers child's direct question. "When Maria has finished then it will be your turn."	Learns that an answer will be forthcoming. Understand and wait turn.
Listening to Other Children in a Group	Encourages children to listen to other children when they speak.	Become interested in other children's ideas.
	"You told us about your baby brother. Now let's listen to Mary."	Listen for meaning when another child speaks in a small group situation.
Listening to Identify Sounds of Rhythm Instruments	Uses rhythm instruments to develop recognition of difference in sounds of instruments.	Try to identify sound and its source.
	Selects instruments, e.g. drum and chime. "Do you know the name of this instrument?" "Will you beat it with these drumsticks, Jose?"	Name the instrument if known or repeat name after teacher. Show understanding by response.

	The Teacher	The Children
	Shows chime. "This is a chime " "Will you strike it with this rod, Ella?" "Does it sound like the drum?"	Repeat name of instrument. Follow direction. Recall drum sound for comparison. Realize that different instruments make different sounds.
	Directs small group to close eyes as another child uses instrument. "What instrument was that?"	Do as directed. Identify instrument by name.
	Uses similar games to identify sounds of other rhythm instruments.	Learn to identify sounds made by various instruments.
	Arranges instruments on shelf or hangs them on board accessible to children.	Select and experiment with instruments.
Listening to Sounds in the Street	Plans experience in listening to street sounds to determine their sources.	Enjoy prospect of listening to sounds in the street.
	Takes children outdoors to listen to sounds, e.g. rumble of subway, auto horn, child crying, dog barking, woman calling, construction noises, boat whistles, etc.	Express surprise that there are so many different sounds. Listen to, isolate and identify individual sounds.
	Selects story e.g., Margaret Wise Brown, The City Noisy Book. Reads to children awaiting their response after each question in the story.	Are able to identify sounds in story. Show by their responses to the questions in the story. Their understanding of the source of the sound. Imitate sounds. See relationship between Muffin in the story and themselves in listening to sounds.
	Relates story to children's experience of listening to street sounds.	
Listening to Sounds in the Room	Provides experiences in identifying sounds in room, e.g., door slamming, clock ticking, paper rustling, ball bouncing, footsteps, etc.	Make finer distinctions. Identify the objects by the sounds they make.
	Use story, e.g. Margaret Wise Brown, The Noisy Book as above.	
	Appreciative Listening	
Listening to Enjoy Rhythm	Uses nursery rhymes to develop recognition of rhythm.	Become aware of rhythm in verse.
	Emphasize rhythm in reciting Mother Goose rhymes.	Repeat rhyme with teacher. Suit actions to rhythm of verse.
Listening to Enjoy Sounds of Words	Guides children to enjoyment of sounds of words.	
Rhyming	Recites a nursery rhyme to develop recognition of rhyming words.	Listen to rhyme. Repeat with teacher.

	The Teacher	The Children
	Leaves out a rhyming word, e.g. Hickory dickory dock A mouse ran up the _____	Supply rhyming word.
	Uses picture of object to identify object with word, especially with Non-English speaking children and children with limited verbal ability.	
	Tells a story with a repetitive refrain.	Participate by joining in refrain.
Listening to Distinguish Quality of Voice	Tells a story in which animals or people talk e.g. The Three Bears.	Develop sensitivity to volume of voice. Distinguish characters in story by tone of voice.
Listening to Enjoy Content	Guides children to love of literature by choosing poems and stories suited to their short attention span and to their interests.	Like stories about animals and their world and stories in which they are identified.
	Provides intimate atmosphere, e.g. individual or small group, snuggling close to teacher.	Enjoy individual attention, the companionship of an adult and the experience of being read to.
	Makes book accessible to children on library table. Informally refers to or asks questions about the story.	Look at book voluntarily. Comment on characters or situations in story. Listen to comments of other children.
	Helps Non-English speaking children and children with limited verbal ability by identifying words with objects in the picture.	Repeats words after teacher. Learns new words and meanings.
Listening to Enjoy Songs	Uses variety of songs during session.	Listen voluntarily and with pleasure.
	Sings lullabies at rest time. Sings or chants when child is in house - keeping area, working with clay, etc.	Recognize that the song is related to the action.
	Sings and demonstrates finger plays to group.	Observe, listen and imitate teacher's words and actions.
	Sings simple songs related to current interests.	Often listen to and repeat songs with teacher, so that each child knows the words well enough to sing alone.
	Encourages participation by Non-English speaking children and children with limited verbal ability in group first and then individually.	Enjoy learning new words when sung.
Listening to Mechanical Devices	Selects records suitable to interest level of children.	Are interested in listening although not being addressed specifically.
	Chooses a record which requires bodily participation by child, e.g., A Visit to My Little Friend.	Respond with suitable activity.

	The Teacher	The Children
	Chooses a record which requires verbal participation, e.g., The Carrot Seed.	Listen with pleasure. Join in the refrain.
	Before playing record uses realia or illustrative material for words or concepts unfamiliar to Non-English speaking children and children with limited verbal ability.	Identify illustrative examples with content of record. (Especially Non-English speaking children.)
	Supplies record which requires no active participation. Keeps record player and records accessible to the children.	Listen quietly. Understand and enjoy the story or music. Choose a record and listen to a story with concentration individually or in small group.
Tape Recordings	Plays tapes of her own voice telling a story familiar to the children. Gives many such experiences before the child records his own voice.	See relationship between story on record and in book.
	Encourages child to record own voice. Encourages small group conversation.	Listen to own voice on tape, to voices of classmates, to contcnt of the conversation.

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EXPERIENCES TO DEVELOP OBSERVATION
(with related verbalization)

To develop the habit of and skill in purposeful, accurate observation the teacher uses both incidental and planned experiences in the classroom and in the community.

	The Teacher	The Children
First Hand Experience in Observing the Classroom General Features	Welcomes each child as he comes to class. Helps children become acquainted with the room.	Walk around room noticing: centers of interest, turtle and/or fish, chalkboards, size of tables and chairs.
Details	Names centers of interest and materials.	Learn names for unfamiliar objects.
	Is aware of needs of Non-English speaking children. Individually or in small group during the play period, identifies by name some things with which they are playing.	Are interested in learning names of things known to some children but unknown to them. Imitate teacher's pronunciation.
Observing Classroom Routines	Encourages children to take and return play materials independently.	In using materials, observe and remember where to get objects and how to return them.
	Encourages children to assist one another.	Watch how other children proceed.

	The Teacher	The Children
Observing Objects in Classroom	"Show Maria where we keep the pegs."	Locate objects requested by teacher or classmate.
	Please give Henry a red crayon."	Identify colors when associated with objects.
	Encourages Non-English speaking children to provide word in their native language.	Non-English speaking children supply word in their native language. Are pleased to supply information other children do not have. Repeat the English word supplied by the teacher and/or by other children.
	Encourages day-to-day observation of new objects displayed, e.g. new turtle, change of pictures, new doll or toy, etc.	Notice changes in room and enjoy new objects.
		Learn the names of new objects. Use these names in daily conversation.
Observing in the School	Plans trip through corridor to extend concept of location of classroom.	Understand they are going on trip to see other rooms in the school.
	Supplies English-speaking buddies for Non-English speaking children.	Non-English speaking children learn from their buddies.
	Identifies enroute: drinking-fountain, dismissal exit, principal's office, lunch-room, etc.	Observe what goes on in other parts of the school.
	Shows and reads aloud signs on room doors and exits.	Notice signs on room doors, exits, etc. Realize signs mean something.
	Points out details of route. "We will go as far as the drinking fountain," etc.	Follow teacher as she points out distinguishing features of route.
Observing Details Through Sensory Experiences	Provides many experiences, e.g. sand play, water play, science, cooking, finger painting, etc. where children have opportunities to feel, hear, taste and touch as well as to see.	Develop concepts by observing details through the senses. Sharpen and refine observation of details.
	Provides three or four apples. Encourages children to look (shape and color), to feel (texture), to smell (sweet odor), to taste (sour or sweet), to listen (crunchy sound when eating).	Cradle whole apple in hand, identify color, shape, odor, texture.
	For the Non-English speaking children, emphasizes the descriptive word to use with the sensory experience.	
	Washes apples. Cuts in small pieces and distributes for eating.	Enjoy and identify taste, and sound when apple is bitten into.
	Provides varieties of paper for use in arts and crafts, e.g. finger paint paper, colored construction	Like to handle and look at varieties of paper.

	The Teacher	The Children
	tissue paper, metallic paper, paper for easel, etc.	
	Identifies paper "We use this shiny white paper for finger painting."	Understand which paper to use for various activities. Identify by color, texture, etc.
	"This thin paper is tissue paper. How soft it feels when you fold or crumple it."	Experiment with paper in collage, etc. Use observation in choosing and using paper. Talk about the differences.
Observing on Walks in Neighborhood	Plans walks outside school to notice traffic lights, to gather autumn leaves, to look for birds, to see new construction work, etc.	Know what to look for.
	During trip points out items of interest.	Notice details of surroundings that might otherwise go unnoticed.
		Observe and distinguish kinds of stores, colors of traffic lights, sidewalk, curb, street, etc.
	Helps Non-English speaking children with the words that identify the items of interest on the trip.	
	Encourages sensory experiences e.g. walking in the leaves, touching the snow, looking in store windows, smelling the bread baking outside the bakery etc.	Use observations later in arts, block building, conversation, story telling etc. Add new words to their vocabulary.
Observing in Finger Plays	Leads children in singing finger plays and accompanying them with appropriate finger action.	Watch, listen and participate.
Observing in Games	Uses follow the leader games, e.g.: "Henry, show us what to do. We will do the same as you. This way, that way we will do Just the same as you."	Follow leader's actions. Imitate what he does. Take turns initiating own action.
Observing in Songs	Selects song which helps children notice details, e.g.: "Mary wore her red dress, red dress, red dress. Mary wore her red dress All day long." (Ruth Crawford Seeger, American Folk Songs for Children, p. 130)	Point out differences in color of clothing worn by children.
	Selects song which calls children's attention to observation of weather, e.g. "Sunshine" p. 6, "Raindrops" p. 7, June Norton, The Sunflower Song Book.	Observe changes in weather. Recognize sunny, rainy, snowy, cloudy, windy, cold, warm weather.
	Makes children aware of connection between the object, its identifying name word and the descriptive word derived from it.	Assist in forming descriptive words from name words, e.g., sun and sunny, wind and windy, etc.
	Gives sufficient time to Non-English speaking children and to children of limited verbal ability for repetition of new words.	

	The Teacher	The Children
Vicarious Experiences:	Selects pictures sufficiently large (no smaller than 9"x12"), in good condition, brightly colored, uncluttered, which show or suggest action.	
Looking at Pictures	Mounts pictures before displaying.	Are attracted to colorful pictures.
	Guides children to read pictures by recognizing objects, noting details, drawing inferences.	Begin to look at pictures carefully.
	Asks questions or makes comments to focus on the main idea.	Respond according to level of maturity, move from simple enumeration of objects to interpretation of action or mood.
	For Non-English speaking children supplies the correct sentence pattern to describe the action, e.g., "The girl is crying."	Non-English speaking children repeat the correct word or sentence pattern.
Observing in Picture Books	Shows picture book. Tells story from book showing pictures sequentially. Shows how to hold book and turn pages.	Learn that pictures in book tell story.
	Encourages children to select book from class library.	Look at picture books in free time. Imitate manner in which teacher uses book. Talk about the pictures and stories in the books.
Perceiving Details in Illustrative Materials	Uses variety of illustrative materials related to urban living, e.g. toy traffic signals, wedgies, rubber bendable figures, fire engines, hydrants, construction trucks, mailbox, cars, etc.	Different children note different details. A cumulative description is the result.

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EXPERIENCES TO DEVELOP SPEAKING

To speak satisfactorily, the child needs to develop facility in creative spontaneous language as well as in structured language. The transition from non-verbal to verbal communication may be aided by use of such non-aural cues as gestures, pictures, facial expressions. Experiences provide effective stimulation for verbal responses from young children.

	The Teacher	The Children
Teacher's Use of Language	Uses simple language. Speaks in clear, distinct voice.	Follow teacher's facial expression, tone of voice and gestures. Recognize the meaning of her words.
	In speaking to children individually or in group, the teacher tries to be near or at child's eye level. This is particularly important for Non-English speaking children.	Tend to imitate manner of speaking, inflection, pronunciation.

	The Teacher	The Children
Expressing Feelings	Helps children express feelings verbally, e.g. "I don't know what's troubling you if you don't tell me about it."	Learn to express feelings through words. Relate cause of anger. Find that teacher will listen.
Securing Attention	Encourages children to use words to secure attention instead of pulling her arm or pointing to object. "Tell me and I'll listen. What is it you want?"	Discover that language is a useful tool in securing attention.
		Use language for requests.
	For Non-English speaking children and for children with limited verbal ability supplies correct request pattern e.g. "I need paper."	
Experiences in the Classroom to Stimulate Verbalization	Maximizes use of play experiences for speech. Weaves language into all activities. Provide stimulating experiences in group living in the classroom which form the basis of something to talk about.	
		Enjoy classroom experiences. Voluntarily comment on some activities.
	Uses snack time to develop pleasure in verbal interaction among the children about what they did in work-play period, something especially important at home, e.g. a new baby.	Relax and lose self-consciousness. Speak to child nearby. Listen when he speaks. Contribute items about themselves to group. Develop control in taking turns in listening and speaking.
	Capitalizes on children's interest to encourage and help them use correct sentence patterns and vocabulary.	
	Encourages children to express their choice of activity verbally.	Progress from pointing and from one word requests to sentences. "I want to paint."
	Encourages children to use descriptive adjectives. "What color paint would you like?"	"I want red paint."
	Supplies two telephones in housekeeping area to stimulate conversation.	Two children at a time hold telephone conversation.
	Permits Non-English speaking children to converse in native language at first. Provides correct English sentence pattern and vocabulary and encourages children to use them.	Non-English speaking children gradually enjoy telephone conversations in English.
	Stimulate the children to verbalize in role-playing the family members by providing suitable clothing props.	Interpret roles of members of family by dramatization and imitation of speech heard at home.

	The Teacher	The Children
	Utilizes tape recorder to encourage child to speak so that he can hear his own voice played back	Listen to story by teacher, voices of classmates, and own voice on tape recorder.
	Allows Non-English speaking children to record in native language at first.	
	Encourages child to retell a story, relate an experience or respond to questions on tape recorder.	Speak for recorder. Listen to own voice.
	Makes available simple puppets for free play activities. Use simple puppets or stick figures in connection with a spontaneous or planned story. Encourages shy child and Non-English speaking child to use puppet or flannel board figures.	Choose puppet to manipulate. Speak for the puppet. Enjoy play with flannel board figures. Use them to reenact story.
Interpret Stories and Verse Through Dramatization and Pantomime	Encourages the children to react to stories and verse.	Willingly express ideas.
	Asks questions that will increase understanding. "Why does Muffin feel sad?" Promotes children's participation by providing simple props.	Acquire understanding of story. Deepen understanding by dramatization. Follow sequence of story. Lose self-consciousness in desire to use the props supplied. Enjoy participation by action. Participate verbally. Enjoy rhythmic repetition of sounds.
	Encourages participation by Non-English speaking children, many of whom understand English before they verbalize.	Non-English speaking children participate successfully in a group activity.
Chants	Introduces chants into classroom activities, ball games, jumping games, etc.	Use repetitive chant as action is performed.
	Chants as she assists child in putting on galoshes. "Push, push, push Pull, pull, pull Stamp, stamp, stamp."	Enjoy using chant as aid in performing difficult task.
	Chants as child jumps off and on a plank on floor. "Jelly in the dish Jelly in the dish Wiggle, waggle Wiggle, waggle Jelly in the dish."	Repeat nonsense chant in connection with activity.
	Chants for ball playing. "Ball, ball Hit the wall Hurry back Before you fall."	Begin to improvise own activity chants.

	The Teacher	The Children
Amenities	Realizes that social mindedness precedes social language. Accompanies "Good morning," "Thank you," etc. with warm smile. Commends acceptable language in social situations with smile and words of approval.	Notice teacher's pleasant behavior in classroom. Respond to tone of voice. Tend to imitate language used in social situations. Increase social vocabulary.
Increasing Vocabulary	Realizes that children's comprehension is greater than their active vocabulary.	Feel free to express themselves in their own language patterns.
	Provides firsthand experiences which stimulate use of new words, e.g., when child is using clay, the teacher uses words as pinch, flatten, roll, pull, pound, smooth.	Listen to teacher's description of what he is doing with clay. Use terms in describing play with clay.
	For Non-English speaking children also teaches vocabulary that may be familiar to other children, e.g., table, clay, etc.	
	Provides variety of firsthand experiences to develop concepts and meaningful vocabulary, e.g. cooking, science, trips, block building, parties.	Acquire new words in connection with new experiences.
	Endeavors to keep new words learned active by discussion and dramatization of experience.	Use new words frequently so that they become permanent additions to vocabulary.

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LITERATURE

What can literature do for children today? How can the teacher use literature to give pleasure and inspiration to young children? Can young children who come from a limited and disadvantaged environment react to the word imagery in stories and rhymes? How can the teacher use pictures and picture books, stories and verse so that these will contribute to the development of new insights? How have mass communication media, such as television, affected the young child? How have the social problems related to urban living created a need for stories which improve self-understanding and give understanding of the behavior and values of other people?

These are some of the problems which confront parents, teachers, librarians and others concerned with the growth and development of young children.

The number of story books written expressly for the young child is larger than ever before in our culture. Yet selection of a suitable poem or story to meet the children's interests and needs demands serious consideration by the teacher. Although stories in themselves cannot satisfy basic needs, the choice of just the right story related to the young child's egocentric interest or immediate need can be of great help.

A second important consideration for the teacher is timing -- just when a particular story will have greatest significance for the child. Upon the teacher's observation of children's development and her knowledge of their backgrounds will depend her awareness of whether the information or concept in the story is sufficiently related to previous experience and knowledge already assimilated by the child or is too difficult for him.

A third facet of the literature program concerns the way in which stories and poems are presented to the children. When story-time takes place in an informal, relaxed environment and when a warm teacher-child atmosphere is established, the likelihood of the child's enjoyment of the story is increased. The experience is in itself sufficiently pleasurable to create an attitude of acceptance of and enjoyment of literature. The teacher's own obvious enthusiasm and enjoyment of stories and poems and her skill in presenting them also tend to increase participation and enjoyment by the child. For children whose ability to understand English is limited, use of illustrative materials, of stories and rhymes with repetitive refrains or clearly defined rhythm, and of gesture, facial expression and vocal intonation by the story teller serve to encourage listening and aid understanding.

Presenting Poetry to Pre-Kindergarten Children

Short, simple rhythmic poems are enjoyed by young children. The rhythm and the sound of the rhyming words catch the child's attention and often evoke response and participation. A poem which has been well received by the children may be said again and again in many situations. In reading or telling a poem, the teacher emphasizes the thought as well as the rhythm. Children are not required to memorize poems. Repetition or participation is encouraged but is purely voluntary.

Nursery rhymes are excellent for developing a feeling for the music of words and for improving agility in speech. Children enjoy the humor in the situation of characters such as Simple Simon to whom they can feel so superior because most of them can understand that whales are too big to fit into pails. The teacher helps the young child understand the humor of an incongruous situation by bringing it to the child's attention, explaining it if necessary and by joining in the laughter and thus showing that she thinks the situation amusing. The Old Woman Who Lived in A Shoe and the first two stanzas of Mary Had A Little Lamb contain humor which is appreciated by young children.

In using collections of poetry, the teacher refrains from presenting poems which contain concepts beyond the children's understanding. "Snowy Morning,"[1] in the collection Away We Go, describes the "step-marks in the snow" which young children delight in making.

Many rhymes and chants from the past have become a part of our culture and are just as appropriate for today's children as they were for children of former days. Among these classics are chants expressing wishes such as,

Rain, rain go away,
Come again some other day,
Little (child's name) wants to play.

1. Barbara Young, "Snowy Morning," p. 6 in Catherine Shaefer McEwen, Away We Go. New York: Thomas Y. Crowell Co., 1956.

Another favorite wishing rhyme is,

Starlight, star bright
First star I've seen tonight
I wish I may, I wish I might
Have the wish I wish tonight.[2]

To familiarize the child with the names of the days of the week, mothers and teachers have chanted,

How many days has my baby to play?
Monday, Tuesday, etc.[3]

The teacher will find many other chants and rhythmic verse in Rimbles.[4]

Familiarity with rhyming verse encourages children to change some of the oft-used words and to substitute rhyming words of their own invention. Children take pleasure in making up and chanting rhyming and alliterative sounds. The teacher fosters this creative response to sounds by encouraging the children to use their original chants as they bounce a ball or engage in some other activity which may be accompanied by verbal expression.

Poetry helps the child add new words to his vocabulary. It is so much easier to remember strange words if they rhyme or have interesting alliterative sounds. Meanings of words are often clarified by the simple context in which they appear. In "The Jumping Frog," by Leland B. Jacobs,"a fine feeling for the designation of timing of day by morning, noon, and sunset is supplied by the frog's statement of what he does at these times.

For the urban child there are many poems about things and places with which he is familiar. "January"[5] expresses the child's common complaint when the snow in which he hoped to play has been shovelled away. The poem, "Drinking Fountain"[6] describes an experience shared by the pre-kindergarten children in school. "Sliding"[7] expresses the fun common to the children on a playground slide.

For the young child with limited verbal development or one who is not familiar with the English language, finger plays offer opportunity for participation while encouraging learning and listening. Many poetry lovers do not consider finger plays in the categorty of literature. However, their significance lies in the imitative response they evoke and the understanding that may come through manual reproduction in addition to words in describing persons and things. Rhymes for Fingers and Flannelboards[8] offers the teacher a variety of traditional as well as modern finger plays from which to choose. Many finger plays have been set to music. A useful assortment of finger plays with simple musical accompaniment may be found in Finger Play by Mary Miller and Paula Zajan.[9]

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2. Austin, Mary C. and Mills, Queenie B. The Sound of Poetry. New York: Allyn and Bacon, Inc., 1963. p. 20.

3. Ireson, Barbara. The Barnes Book of Nursery Verse. New York: A.S. Barnes and Co., 1960. p. 10.

4. Evans, Patricia. Rimbles. Garden City, New York: Doubleday and Co., 1961.

5, 6, 7. Chute, Marchette. Rhymes About the City. New York: The Macmillan Co., 1946. p.

8. Scott, Louise Binder and Thompson, J. J. Rhymes for Fingers and Flannelboards. St. Louis: Webster Publishing Co., 1960.

9. Zajan, Paula and Miller, Mary. Finger Play. New York: G. Schirmer, 1955.

For the teacher's convenience some of the hard-to-find or out-of-print rhymes are included here in full, as well as a list of poems appropriate for four-year-old children.

FINGERPLAYS

Ten Fingers

I have ten little fingers
(follow action as rhyme indicates)
And they all belong to me.
I can make them do things.
Would you like to see?
I can shut them up tight
Or open them wide.
I can put them together
Or make them all hide.
And hold them just so.

Great Big Ball

A great big ball,
(Join hands, fingertips touching to make a big ball)
A middle-sized ball,
(make a smaller ball)
A little ball I see
(Join thumb and index finger of one hand to make a little ball)
Let's see if we can count them
(Make each of the three balls as they are counted.)
One, two, three.

Beehive

Here is a beehive; where are the bees
(make a fist)
Hiding away where no one sees
Watch them and they will come out of the hive.
One, two, three, four, five. Bzzzzzzzzzz
(extend fingers one at a time; move fingers)

My Turtle

This is my turtle
(make fist; extend thumb)
He lives in a shell.
(Hide thumb in fist)
He likes his home very well.
He pokes his head out when he wants to eat
(extend thumb)
And pulls it back in when he wants to sleep.

Two Little Eyes

Two little eyes that open and close.
Two little ears and one little nose.
Two little cheeks and one little chin.
Two little lips with the teeth closed in.

On My Head

On my head my hands I place,
On my shoulders, on my face,
On my hips and at my side,
Then behind me they will hide.
I will hold them up so high;
Quickly make my fingers fly;
Hold them out in front of me;
Swiftly clap - one, two, three.

This Is The Circle That Is My Head

This is the circle that is my head,
(make large circle with both hands)
This is my mouth with which words are said,
(point to mouth)
These are my eyes with which I see,
(point to eyes)
This is my nose that's a part of me.
(point to nose)
This is the hair that grows on my head,
(point to hair)
This is my hat, all pretty and red,
(place hands on head, fingers pointed up and touching.)
This is the feather so bright and gay,
(extend index finger upward along side of head)
Now I'm all ready for school today.

The Train

Choo, choo, choo,
(Slide hands together)
The train runs down the track.
(Run fingers down arm.)
Choo, choo, choo,
(Slide hands together)
And then it runs right back.
(Run fingers up arm.)

The Bus

The wheels of the bus go round and round,
Round and round, round and round,
(Hold hands in front and roll one over the other)
The wheels of the bus go round and round,
Over the city streets.
The driver of the bus blows his horn Beep-beep-beep,
Beep-beep-beep.
(Press thumb on fist)
The driver of the bus blows his horn,
Over the city streets.
The driver of the bus says, "Pay your fare,
Pay your fare, pay your fare."
(Extend hand as if receiving fare)
The driver of the bus says "Pay your fare,"
Over the city streets.
The people on the bus go bump, bump, bump;
Bump, bump, bump, bump, bump, bump;
(jounce up and down)
Over the city streets.

Here's A Cup

Here's a cup, and here's a cup
(Make a circle with thumb and index finger of one hand, extend arm and repeat)
And here's a pot of tea.
(Make a fist with other hand and extend thumb for spout)
Pour a cup and pour a cup
(tip fist to pour)
And have a drink with me.
(make drinking motions)

Suggested Sources of Finger Plays:

Grayson, Marion. Let's Do Fingerplays. New York: Robert B. Luce. Inc., 1963.

Scott, Louise Binder and Thompson, J. J. Rhymes for Fingers and Flannelboards. St. Louis: Webster Publishing Co., 1960.

Zajan, Paula and Miller, Mary. Finger Play. New York: G. Schirmer, 1955.

Suggested List of Poems for Pre-Kindergarten

Title	Source and Item No.
1. Nursery Rhymes, Mother Goose, Nonsense and Fantasy	De Angeli, Marguerite. Book of Nursery and Mother Goose Rhymes 33274
Baa Baa Black Sheep Jack and Jill Humpty Dumpty Little Bo Peep Mary Had a Little Lamb Old Woman in a Shoe Jack Be Nimble Polly Put the Kettle On Twinkle Twinkle Little Star Mary, Mary Pop Goes the Weasel Rockabye Baby To Market, To Market	Rojankovsky, Fedor. The Tall Book of Mother Goose. 33290 Tudor, Tasha " " 33285 Wright, Blanche Fisher. Real Mother Goose. 33288
So Many Monkeys. Marion Edey and Dorothy Grider. p. 232 What Does the Bee Do? Christina Rossetti. p. 85	Austin, M.C. and Mills, Q.B. Sound of Poetry. 198-171 TBC
The Big Clock (anon.) p.16	Hughes, Rosalind. Let's Enjoy Poetry. 198-801 TBL
2. Everyday World	
New Shoes. Alice Wilkins. p.201 Ice. Dorothy Aldis p. 364 Mitten Song. Marie Louise Allen. p.364 Who Has Seen The Wind? Christina Rossetti. p. 312	Arbuthnot, May Hill. Time for Poetry 317141.5
Cats. Marchette Chute p. 81 I Love Little Pussy. Jane Taylor (first half). p. 32 Puppy. Aileen Fisher. p. 36 Rain. Robert Louis Stevenson. p. 312 The Package. Aileen Fisher. p. 101 Walking. Grace Ellen Glaubitz.p. 108 Barber's Clippers. Dorothy Baruch. p. 140 The Lesson. Jane W. Krows. p. 186 Rain, Rain p. 315 Star Light, Star Bright. p. 20	Austin, M.C. and Mills, Q.B. Sound of Poetry. TBL 198-171
Nibble, Nibble (Poems about nature suitable for Young Children)	Brown, Margaret Wise. Nibble Nibble, TBL
Drinking Fountain. p. 8 Sliding. p. 17	Chute, Marchette. Around and About 31798.9
Teddy Bear. p. 39 The Puddle. p. 41 Playing Ball p. 49	Evans, Patricia. Rimbles, 31634
Soft Steps. Georgette Agnew. p. 11 For Christmas. Dorothy Aldis. p. 121 Everybody Says. Dorothy Aldis. p. 123 Stop Look and Listen. (anon.) p. 223 This Happy Day. Harry Behn. p. 252	Hughes, Rosalind. Let's Enjoy Poetry TBL 198.801
Fat Old Witch. p. 32 Just Around the Corner. p. 1 Out in the Rain. p. 11	Jacobs, Leland B. Just Around the Corner 31843
The Bath. p. 26 The Snow Man. p. 29 Lunch. p. 33	McBrown, Gertrude Parthenia. The Picture Poetry Book: 7th sup.

Title	Source and Item No.
Singing Time. Rose Fyleman, p.	McEwen, C.S. Away We Go! 31763.
Snowy Morning. Barbara Young p. 6	
A Jolly Noise. Ethel Jacobson. p. 20	
Like Me. Dorothy Aldis. p. 21	
The Merry-Go-Round. Electa Clark. p. 24	
Lying Awake (city sounds) Bartara Young. p. 30	
Dandelions (present for mother) Marchette Chute. p.67	
Mary's Lullaby. Ivy O. Eastwick. p. 77	
After a Bath. Aileen Fisher. p. 88	
Snow. Alice Wilkins. p. 96	
Park Play. James S. Tippett. p. 4	

Other Sources of Poetry for Young Children

Association of Childhood Education. Sung Under the Silver Umbrella. New York: The Macmillan Co., 1935.

Clark, Ann Nolan. In My Mother's House. New York: Viking Press, 1961.

Frank, Josette. Poems to Read to the Very Young. New York: Random House, 1961.

Geismer, B.P. and Suter, A.H. Very Young Verses. New York: Houghton Mifflin Co. 1945.

Milne, A.A. When We Were Very Young. New York: E.P. Dutton and Co., 1961.

Obanion Phyllis. Favorite Nursery Songs. New York: Random House, 1958.

April 1, 1965

Presenting Stories

Before the teacher reads or tells a story to the children, she should be sufficiently familiar with the story so that she can communicate with the children in much the same way as when she is speaking to them. The experience of hearing a story can be a delight to a child. The atmosphere is one of security in an experience shared with an adult.

The teacher realizes that the four-year-old's attention span is a short one and does not choose a long story nor tell more than one story at a story session. The smaller the group listening to the story, the more likelihood there is of better and longer concentration.

The young child likes stories with happy endings. At this age they add to his sense of security in a world he often finds strange and frightening. Bedtime for Frances[1] can help a child face bedtime with a feeling of safety. Goodnight Moon[2] can also make the time for bed a pleasant ritual.

Although a four-year-old wants to feel important, he needs much help in bolstering his self-image. A child who comes from a disadvantaged background particularly needs help in securing recognition and acceptance from his peers before he can feel confidence in himself. Stories such as Wait for William[3], in which a small boy surprisingly achieves recognition, and The Little Engine That Could[4], which tells of the achievement of a small locomotive, give the child confidence as he identifies with these small but successful heroes. Stories in which the child can identify himself with the characters are helpful to children from the various ethnic groups in the community. Rosa-Too-Little[5], The Snowy Day[6], and Keiko's Birthday[7], are good stories for strengthening egos and human relations as well.

When a teacher uses a picture book, she makes certain that all the children in the story are seated so that they can see the illustrations. If the group is large, the pictures should be sufficiently large and uncluttered so that the child "read" and gain understanding from the illustrations. Both The Snowy Day and Make Way for Ducklings[8] have pictures which although realistic, have aesthetic value for young children.

Sometimes the teacher will use the flannelboard or simple stick puppets as a means of enriching the story time and of encouraging participation by the children. The Three Bears, with their three bowls, three chairs and three beds, all in three sizes, is a story in which the visual perception of the size differences by means of the flannelboard can be very helpful. Another form of child participation would be through the dramatization of a story. Stories with a simple sequence of action such as Caps for Sale[9] are easy for the children to act out. This Is The Way the Animals Walk[10] is usually successful for dramatization. Stage properties sometimes add to the fun of dramatization, but only if they are kept so simple that they do not impede the action of the story. Dramatization of nursery rhymes gains something when Jack and Jill have a real pail and when there is a candlestick or representation of one for Jack Be Nimble to jump over.

There are available some well illustrated and ingenious ABC books. In every group there are some children who enjoy hearing the rhymes and occasionally recognizing the letters. Ape in a Cape: An Alphabet of Odd Animals[11], and The Gay ABC[12], and The ABC Bunny[13] are pictorially attractive enough for a child to look at alone. The Sleepy ABC[14] is also a charmingly illustrated book with its sleep-inducing animals.

1. Hoban, Russel. Bedtime for Frances. New York: Harper and Row, 1960.
2. Brown, Margaret Wise. Goodnight Moon. New York: Harper and Bros. 1947.
3. Flack, Marjorie. Wait for William. Boston: Houghton Mifflin Co., 1935.
4. Piper, Watty. The Little Engine that Could. New York: The Platt and Munk Co., Inc., 1930, 1954.
5. Felt, Sue. Rosa-Too-Little. New York: Doubleday and Co., 1950.
6. Keats, Ezra. The Snowy Day. New York: The Viking Press, Inc., 1952.
7. Brown, J. P. Keiko's Birthday. New York: Friendship Press, 1954.
8. McClosky, Robert. Make Way for Ducklings. New York: The Viking Press, Inc., 1941.
9. Slobodkina, Esphyr. Cap for Sale. New York: William R. Scott, Inc., 1957.
10. Woodcock, Louise. This Is the Way the Animals Walk. New York: William R. Scott, Inc. 1946.
11. Eichenberg, Fritz. Ape in a Cape. New York: Harcourt Brace, 1957.
12. Françoise. The Gay ABC. New York: Scribner, 1939.
13. Gág, Wanda. The ABC Bunny. New York: Coward-McCann, 1933.
14. Brown, Margaret Wise. The Sleepy ABC. New York: Lothrop, Lee and Shepard Inc., 1953.

There are books often designated as participation books because they encourage the children to become involved in the story. In Where's My Baby[15] the children can look for the baby kangaroo in its mother's pocket. Who's There? Open The Door![16], Animals for Sale[17], and Tic, Tac and Toc[18] are constructed so that lifting a small flap or turning a half-page supplies the answer and the surprise for the child.

No matter which story the teacher chooses or how she presents it, the teacher is aware that the main purpose of the story time is to help the children learn to like stories. Through her skill and preparation she makes story time a time to look forward to and a time to be remembered.

15. Rey, Hans A. Where's My Baby? New York: Houghton Mifflin Co. 1945.
16. Munari, Bruno. Who's There? Open the Door! Cleveland: The World Publishing Co., 1957.
17. _____. Animals for Sale. Cleveland: The World Publishing Co., 1957.
18. _____. Tic, Tac and Toc. Cleveland: The World Publishing Co., 1957.

IV
DEVELOPING SENSITIVITY TO MUSIC

Music provides some of the happiest moments of the child's day. Although there are planned times for music in each day, children in a relaxed classroom will sing and hum spontaneously as they work and play. The teacher realizes that music is an area in which young children respond naturally and participate creatively. Music time may be the one activity during which a shy child, a Non-English speaking child or a child who finds verbal communication difficult feels free to join the other children and to express himself.

Selection of Songs

If the child is to find satisfaction in music, the songs selected should appeal to his interests, contain good imagery as in poetry and be pitched to suit the singing range of the child's voice (approximately from the first line to the fourth space of the treble staff). Songs that are pitched too low encourage children to talk rather than to sing. Songs with pronounced rhythm and attractive melodies appeal to young children.

Appreciation of Music

Although the children may be bombarded by music on television and radio at home, this is not necessarily music that leads to aesthetic appreciation. It is the teacher's responsibility to develop sensitivity to and appreciation of music other than the popular music the child hears. She accepts whatever musical experiences he may bring from home and enriches them with a carefully, selected variety of songs and rhythms.

Rhythms

Rhythms encourage a total involvement of the child because they allow both physical activity and emotional release and expression. Teachers are careful not to impose rigid standards that may thwart and inhibit childrens expression and enjoyment of rhythms. The child interprets his physical and social world as he uses his body in response to music. Hoops and materials such as scarves, ribbons, and paper streamers help children give an expression to the mood of the music.

Rhythm Instruments

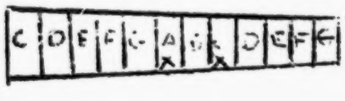
In using rhythm instruments such as drums, triangles, bells,tambourines, sticks, tone blocks, xylophones and cymbals, the child learns to discriminate between the different sounds of the various instruments. Although rhythm and melody instruments may be used in group situations, they should be available for individual experimentation during the free play period.

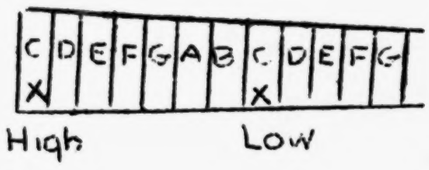
THE TEACHER IS NOT EXPECTED TO USE THIS EXACT LANGUAGE NOR ARE THE EXPERIENCES SUGGESTED THROUGHOUT THIS BULLETIN COMPREHENSIVE. MANY OF THE ACTIVITIES ARE ON-GOING AND NEED REPETITION. THE EXPERIENCES ARE MERELY SUGGESTIVE. THEY MAY BE USED WITH INDIVIDUAL CHILDREN OR A SMALL GROUP OR, RARELY, WITH A LARGE GROUP.

Experiences with Music

Purpose of Experiences	The Teacher	The Children
Encourage Socialization	Sings joyfully with group. Encourages shy child, Non-English speaking child and child with limited verbal ability to sing or hum with group.	Lose self-consciousness as they listen to teachers and classmates.
	Selects and adapts songs of welcome, e.g. "Here we are together, together, together." Here we are together, all sitting on chairs (To tune of Did You Ever See a Lassie?	Tend to imitate what others are doing. Want to be part of group Join in the singing.

Purpose of Experience	The Teacher	The Children
Differentiate between Singing and Speaking	Shows difference between singing and speaking voice. Recites poem, e.g., Twinkle, Twinkle Little Star. "Was I singing or speaking?"	Identify as "speaking."
	Sings the song "Was I singing or speaking?"	Recognize as "singing"
	"Shall we speak or sing Twinkle, Twinkle Little Star?"	Make choice and sing or speak the words with the teacher.
Improve Listening Skills and Rhythmic Response	Shows drum. "I have a talking drum. It can tell you to do many things."	
	Plays walking rhythm. "What is it telling you to do?"	Listen to drum.
	Assists children to feel rhythm by clapping and to respond by walking to music.	Clap in time. Do what drum says.
	After a few times, plays the appropriate rhythm without giving verbal directions.	
	At other times proceeds in similar manner to develop recognition of run, gallop, tip-toe etc.	Suit bodily actions to drum rhythms.
	Uses appropriate recorded music to develop these activities.	Suit bodily actions to rhythm of music on record.
Awaken Awareness of Beauty of Sound and Motion	Plays a waltz record. Glides to waltz music with easy, long motion.	Listen to record. Watch teacher glide. Glide with teacher.
	When children have a feeling for the rhythm, shows how to use colored scarves (to avoid tangling and tripping)	Watch teacher use scarf as she glides. Experiment with scarves as they glide to waltz music.
Channel Physical Energy	When children seem restless, selects appropriate music for bodily rhythmic response e.g., jump to music.	Respond vigorously with bodily action to music.
Provide Basis for Future Musical Interests	Associates music with another pleasurable activity, e.g., uses lullaby record or sings Rock-a-Bye-Baby, and provides dolls to be rocked in arms.	Listen to lullaby and rock dolls in arms to music. Some voluntarily join in the song.
	Uses record e.g., Brahm's Lullaby as background music during rest period. Reminds children of lullaby mood.	Relax with the music; rest quietly.
Encourage Vocalization	(Suggested pitches for teacher's voice, 3rd and 2nd spaces in treble clef, if in doubt, play a and c on xylophone to raise own pitch.)	



Purpose of Experience	The Teacher	The Children
	Occasionally sings greetings, questions, directions, etc. "Where is Maria?"	Tend to respond in same pitch. "Here I am."
Increase Ability to Recognize Familiar Tunes.	After children have learned three or four songs, hums one and asks: "Which song is this?" If necessary, gives clues, e.g., "Is it our dancing song or our sleeping song?"	Listen to humming. Identify song in any way, e.g.,"our sleeping song"or by name of song or by singing the words or by showing the appropriate action.
Clarify Concepts	Uses songs having descriptive words e.g. high, low; up, down; in, out, etc.	Show understanding by appropriate action.
	Uses xylophone to show meaning of high and low in sound. Strike large and small bar for high and low pitch.	Identify which sound is high and which is low.
		Experiment with xylophone to compare high and low sounds.
Identify Sounds and their Sources.	Uses rhythm instruments for sound effects in telling stories.	Listen and watch to connect sound in story to sound of instrument.
	Provides materials, e.g., pebbles, marbles, sand, beans, etc. Puts different materials in different boxes or cans for children to shake.	Shake boxes. Identify sounds as loud, soft. Name material in box that made the sound.
	Arranges rhythm instruments on shelves or hangs them on perforated board accesible to children.	Try out instruments individually during free play period.
	Directs small group to close eyes as a child uses an instrument. Conceals instrument. "Open your eyes. What instrument was that?"	Close eyes while listening to sound. Open eyes and name instrument or identify by showing how it is used.
Give Emotional Outlet.	Sings wholeheartedly. Puts something of herself into musical expression.	Tend to participate in what teacher enjoys.
	Encourages children to sing songs learned or made up, or to hum during other activities e.g. in housekeeping area, block play etc.	Find that they can sing. Express emotion through songs and motion.

Music References for Teacher's Use

Songs should be pitched to suit the singing range of the child's voice which is approximately from the first line to the fourth space of the treble staff.

Music Anthologies

1. Bailey, Charity, Sing A Song. New York: Plymouth Music Co., 1955.
2. Landeck, Beatrice, Songs To Grow On. New York: Edward B. Marks Music Corp. 1950,
3. _____, More Songs To Grow On. New York: Edward B. Marks Music Corporation, 1954.
4. Seeger, Ruth, American Folk Songs for Children. Garden City: Doubleday and Company, 1948.

Songs for adaptation to the group:

"If You're Happy and You Know It"
"Where Is (child's name)? to the tune of "Thumbkin."
"Mary Wore A Red Dress - substitute child's name and item of clothing.
"Good morning" (child's name) - to the tune of "Mr. Yellowbird."
"Michael, Row Your Boat Ashore" - substitute child's name.
"Hello, Everybody" - substitute child's name and/or other greetings.

"Ha-Ha This A-Way"	Reference	No.	3	above
"Let's Go To The Zoo"	"	"	"	"
"Rig-a-Jig-Jig"	"	"	"	"
"Anatomical Song"	Reference	No.	2	above
"Bingo"	"	"	"	"
"By'm Bye"	"	"	"	"
"Hey, Betty Martin"	"	"	"	"
"Mr. Rabbit"	"	"	"	"
"Over in the Meadow"	"	"	"	"
"Shoo, Fly"	"	"	"	"
"Skip To My Lou"	"	"	"	"
"The Mocking Bird"	"	"	"	"
"There's A Wheel A-Turning"	"	"	"	"
"This Old Man"	"	"	"	"
"Happy Birthday"	Traditional			
"Jingle Bells"	Traditional			
"Old Macdonald Had A Farm"	Traditional			
"El Coquito"	Reference	No.	1	above
"Train Is A-Coming"	Reference	No.	1	above
"With One Peseta"	Reference	No.	1	above

Games

"Ha, Ha This Way"	Reference	No.	3	above
"Up On The Mountain"	Reference	No.	2	above
"Jim Along Josie"	Reference	No.	4	above
"Sally Go Round the Sun"	"	"	"	"
"Who's That Tapping On My Window"			"	"
"Tommy Tittlemouse",	Traditional			
"Hokey Pokey"	Traditional			

Phonograph Records - Folkways
Learning As We Play - Volume 1
American Folk Songs for Children
School Days - Volume I and II
Songs To Grow On
More Songs To Grow On
Birds, Beasts, Bugs, and Little Fishes
Birds, Beasts, Bugs and Bigger Fishes

Phonograph Records - Children's Record Guild
Rhythmic Movement

Sunday in the Park
A Visit To My Little Friend
Train To The Farm
Train To The Zoo
Let's Play Zoo
Nothing To Do
Jingle Bells
When the Sun Shines
Rainy Day

Listening

Carrot Seed
The Sleepy Family
Muffin in the City
Muffin in the Country
The Little Fireman
Little Indian Drum
Hot Cross Buns
Look at Michie Banjo
Me, Myself and I
Happy Birthday
1,2,3 Zing, Zing, Zing - Folkways

Classical Music Suggestions for Listening and Rhythmic Interpretation

Nutcracker Suite	Tschaikowsky
Hansel and Gretel	Humperdinck
Marches (collection)	
Lullabies "	
Bolero	Ravel
Midsummer Night's Dream	Mendelssohn
Surprise Symphony	Haydn
Wild Rider	Schumann
Knight of the Hobby Horse	Schumann
Toy Symphony	Haydn
Grand Canyon Suite	Grofe
Minuet	Mozart
Norwegian Dance	Grieg
Waltzing Doll	Poldini

VI

Establishing Standards of Health and Safety

Inherent in the total pre-kindergarten program is the fostering of good physical and mental health attitudes and habits. The safety and health of the children are the teacher's primary concern as she arranges the physical environment of the room, plans activities and sets up routines. She is guided, also, by the Board of Education regulations affecting health and safety practices in a school.

The pattern of school living, however informal, limits the natural outlets of children's energy. Provision is made for daily periods of outdoor play, weather permitting. Large muscle activity that is possible only when there is space to run and jump is needed even in a two hour session. Equipment that is appropriate for outdoor activities is utilized as frequently as possible throughout the week. Even where there is no equipment such as slides and see-saws, available, outdoor activity and the freedom involved, are part of the planned program.

In inclement weather, the teacher tries to utilize other school resources and space so that children have ample opportunity for freedom of movement, and change of environment.

Snack time provides an opportunity for social living, for the practice of good eating habits and for learning the kind of food appropriate for snacks. In a full day program, provision is also made for children to eat a hot, nutritious lunch, preferably in their own classroom. Morning and mid-afternoon snacks are provided in addition to the hot lunch. All meal and snack times should be orderly and relaxed.

Rest is an integral and significant part of the child's day. Children learn to relax after vigorous play and before and after meals. A balance of rest and activity is important for the growing child. In a full day program, it is especially important for young children to sleep on cots in a darkened, well-ventilated room. Whenever possible, provision is made for hyper-restless children to relax apart from the group. All members of the teaching staff, including volunteers, should be on duty to assist with individual children who need the one-to-one relationship with a supportive adult at rest time.

If the health program is to lead to the correction of remedial physical defects, it is necessary that the parent and teacher share concern for the child's physical welfare. Individual parent conferences or home visits by the teacher offer excellent opportunity for alerting parents to the child's need and securing the parent's cooperation in remedying it. Occasional group parent conferences at which the school dental hygienist, nurse or doctor is the resource person, bring the parent closer to the school family which is concerned with the child's health.

In communicating with Non-English speaking parents, the teacher may seek help from the school's Auxiliary Teacher or from a bilingual parent. As an aid for teachers in informal daily contacts with Non-English speaking parents, the pamphlet published by the Board of Education, Phrases With Spanish Equivalents For Use In Schools, will be helpful.

Involving parents in parties, breakfasts or cooking experiences in school also serves to interpret to the parent the school's concern for the child's health. Desirable attitudes toward food suitable for young children and for habits of safety and cleanliness in food preparation are stressed. The teacher does not embarrass the child by calling attention to negative health factors over which children of this age have no control. The teacher provides the information and encouragement needed by the parent to insure the necessary attention to the child's welfare.

The health and safety program in the pre-kindergarten provides for experiences in health guidance, health and safety education and physical activities.

The teacher is not expected to use this exact language nor are the experiences suggested throughout this bulletin comprehensive. Many of the activities are ongoing and need repetition. The experiences are merely suggestive. They may be used with individual children or a small group, rarely with a large group.

	The Teacher	The Children
Health Guidance	Observes children informally upon arrival and throughout the day for symptoms of illness.	
	Takes children who seem ill to the nurse for examination and home referral.	Understand that nurse will help them feel better.
	Discusses with children why they may not stay in school when they are ill. Reassures children that they will be cared for.	Realize that they must stay home to get better and so that other children will not catch their illness.
	Encourages children to tell her when they feel ill.	Tell teacher if feeling ill.
	"How can you tell when you are sick? Are you happy or cranky, tired or playful?"	"I'm sneezing, coughing; I feel hot, tired, cranky, etc.
	"What does your mother do to make you better?"	"Puts me to bed." "Takes my temperature." "Takes me to the clinic." "Gives me aspirin." etc.
	Provides art materials for making simple get-well cards for sick classmate.	Enjoy art activity. Learn social amenities.
	Walks to mailbox with class to mail cards.	Are cheered to know their classmates miss them. Feel important. Develop positive attitude to school.
Height and Weight	At designated time in school term, weighs and measures children. Records information on health card.	Enjoy attention of being weighed and measured. Take turns in using scale.
	Tells children how much they weigh.	Are interested in weight. Tell one another how much they weigh.
Gain Confidence in Medical and Dental Personnel	Plans trip to medical or dental offices in school. Arranges to have nurse, doctor or dentist greet children.	Become acquainted with doctor, dentist or nurse. Lose fear of physical examination.
	On return to class introduces hand puppets of doctor, nurse and dentist.	Individually or in small group reenact experiences with doctor, dentist and nurse.
	Provides stethescope, doctor's bag, nurse's cap in housekeeping corner.	Recreate through role-playing the functions of doctor, dentist and nurse.
	Displays pictures of doctor, dentist and nurse.	Observe and comment about pictures.
Follow-up Procedures	Encourages and, if necessary, assists children with special needs or handicaps.	Learn to accept and play with children who may be different from themselves.
	Gives praise and encouragement to child wearing glasses for first time.	Gradually accepts wearing of glasses as natural.
	Keeps height chart in room. Encourages children to stand against it and be measured.	Feel that growing is important. Feel proud when they have grown.

	The Teacher	The Children
Health and Cleanliness Protection	At beginning of term, demonstrates hand-washing routines. Keeps supply of paper towels within convenient reach of children.	Voluntarily and independently wash hands before eating and after going to the toilet, playing with clay, etc.
Use of Handkerchief or Tissue	Discusses how to use and where to keep handkerchief or tissue. Keep open box of tissues or paper napkins in an accessible place.	Use handkerchief or tissue to cover mouth and nose when coughing or sneezing. Discard tissue in waste basket when used. Put handkerchief in pocket.
	Urges children to take them as needed.	Independently take tissue as needed.
Use of Drinking Fountain	Shows how to use public drinking fountain without putting mouth to faucet.	Drink from fountain without squirting water or putting mouth to faucet.
Toilet Routines	Establishes toilet routines.	Use toilet independently and correctly.
		Wash and dry hands without being reminded.
Good Food Habits and Eating Practices	Plans trip to local market to acquaint children with vegetables.	Help teacher buy and carry back to school vegetables they have chosen, e.g., carrots, green pepper, etc.
Preparation of Food	Washes vegetables. Prepares them for eating.	Assist in washing and preparing vegetables.
	"Why must we wash the vegetables?"	Learn that vegetables must be washed before eating.
	"Can we eat the skin?"	Learn what parts of vegetable are edible.
Serving Food	Serves small pieces of raw carrot or other vegetable chosen.	Help to serve food. Taste small portion.
	Provides napkins.	Observe amenities.
	Encourages children to taste food if new or strange to them.	Ask for second helping if desired.
Choice of Healthful Foods	Plans breakfast with children. Guides choice of menu to include healthful and easy-to-prepare foods, e.g., juice, dry cereal or bread and jelly, milk.	Suggest foods they think good for breakfast. Decide on what to buy.
	Plans trip to buy food.	Accompany teacher to market. Help carry food back to school.
Social Amenities	Supplies mats, bowls, paper cups, paper napkins, spoons, etc. Reminds children to wash hands before serving food.	Wash hands before helping to serve food. Set tables. Wait until all are served. Eat slowly. Enjoy food in company of other children.
Cleaning up	Makes available sponges, waste baskets for clean-up time after eating.	Assist in cleaning tables with damp sponge and in throwing debris into wastebasket.

	The Teacher	The Children
Snack Time	Provides napkins, straws. Has sponge available in case of spilled milk. Accepts spilled milk as accident of no great consequence. Joins children at table and participates in informal conversation.	Set tables for snack and distribute milk and cookies. Relax and enjoy snack time.
	Sets example of good table manners for children.	Tend to imitate wiping mouth with napkin.
	Establishes routines for disposing of straws, milk containers, etc.	Clean up when finished.
Care of Teeth	"How many children have toothbrushes? Show us how you use them." "Why do we brush our teeth? What would happen if we did not brush our teeth?"	Act out how they brush teeth.
	Sings and shows: "This is the way we brush our teeth, etc."	Sing and act out with teacher.
	Discusses which foods are good for teeth and which bad for teeth, e.g.: "Raw vegetables are good for teeth because we have to chew them. Candy is bad for our teeth. Milk is good for teeth."	Tell if they eat raw vegetables at home. Tell if they drink milk.
	Invites dental hygienist to classroom to encourage children to brush teeth and visit dentist.	Learn how the dentist helps them. Tell if they brush teeth every day.
Rest	Provides mats for a brief rest period daily. May play quiet music.	Take mats and relax on floor. Listen quietly to music.
Safe Use and Care of Materials	Arranges room so that activities such as woodworking and block-building are away from main traffic areas.	Learn to play on floor away from door and sink.
	Demonstrates safe way of carrying scissors and replacement in scissors rack.	Use scissors correctly and return to rack when finished.
	When using hot plate for cooking, discusses safety procedures.	Avoid touching hot plate or coming near hot pot without teacher direction.
	Discusses rules for safety in outdoor play.	Practice safety rules in playground.
	"Where can we run in the yard?"	Understand limits.
	"Why do we walk in back of the swings?"	"So we won't get hurt."

	The Teacher	The Children
Fire Drills	Explains meaning of fire gong.	Are not afraid of the loud gong.
	Practices fire drill routines to allay fears.	Walk on line, holding partner's hand.
Trips	Plans trip with children in advance.	Interest aroused.
	Explains procedures in walking downstairs, in walking through streets.	Hold railing with one hand. Hold partner's hand in hall and street.
	Reads story: Red Light, Green Light by Gordon MacDonald.	Learn that red means stop and green means go.
	Calls attention to traffic lights on trip.	Stop before crossing. Distinguish between red and green.
	Supplies material for making simple traffic signals to be used with toy cars in block corner.	Make and use simple traffic signals in dramatic play in block area.
Accidents	Encourages children to let her know when they have an accident, e.g., fall down, bump head, etc.	Tell teacher when they are hurt.
Care of Pets	Demonstrates proper handling and care of class pets, e.g., how to take turtle from his tank when it needs cleaning, etc.	Feel responsibility for care of pet. Handle carefully. Tell how they care for pets at home, e.g., cat, dog, bird.
Workbench	Provides place in drawer of workbench or hanging on pegboard for woodworking tools.	
	Establishes routine of returning tools after use.	
	Shows tool, names it and demonstrates how it is used.	Learn name of tools, how to hold hammer, how to clamp wood for sawing.
	Arranges woodworking area so that it is not near other play areas.	
	Limits number of children at workbench at one time.	
	"Why can't more than two children work at the workbench at one time?"	"It gets too crowded." "You can't work." "Someone may get hurt if it's crowded."
Large Muscle Activity	Plans for large muscle activity daily, weather permitting.	
	Furnishes hoops, hollow blocks and planks for balancing, and balls if no permanent equipment such as seesaws and jungle gyms are available.	Develop balance and coordination. Relieve tensions and aggressions by physical activity.
	Introduces singing games indoors or outdoors.	

	The Teacher	The Children
	Uses rhythm instruments and records to initiate rhythmic activities.	Join in active games. Develop ability to skip, run, etc. in time to music or singing.
Keeping Our Room Clean	Establishes routines for clean-up time after free play.	
	Has place for materials, accessible to children.	Return materials when finished playing.
	Encourages children to clean up center in which they played, e.g., sweep up spilled sand, sponge off paste from table, stack like blocks together, and wash paint brushes, pick up floor scraps, and cover paints, etc.	Learn to accept responsibility for cleaning up own area. Help others who have more to do.

VI

DEVELOPING CONCEPTS IN SOCIAL STUDIES

Coming to school for the first time is one experience that children in the pre-kindergarten have in common. For a majority of the children, it is also their first experience of belonging to a group other than the family. It provides, therefore, initial motivation and a functional basis upon which to build concepts of the child as an individual and as a member of a social group.

Because modern means of transportation and communication have made hitherto remote places and people familiar to the young child, many educators would no longer limit social studies to social phenomena in the young child's immediate environment. However, it is suggested that the known and the near should be used as springboards to help the child understand ideas of likenesses and differences in people and places and for other experiences which in our modern age have been brought closer to the child's life.[1]

A study[2] indicates that although children are curious about far away places as well as about the family and neighborhood, there is a direct relation between the children's background of experience and the amount and kind of their information and understandings. It follows, therefore, that the teacher must know her children, their backgrounds, basic understandings and interests before she selects experiences.

Trips serve not only to give children information about the community but also to help them develop concepts of direction, of spatial relationships and of social relationships that would be valid in other geographic areas and communities.

None of these concepts can be developed in a short time. Children need many opportunities to clarify and reinforce their understandings in discussion, dramatic play and art media.

Within the intimate and informal atmosphere of the pre-kindergarten, the teacher stimulates the development of desirable social attitudes and understandings, which include:

Self-image	Each child in the group, including me is important.
Likenesses and Differences	People are alike in most ways, yet different in some ways.
	Each person in a group has different talents and so contributes to the group in different ways.
Rules and Laws	People make rules and laws for the safety and health of all.
Seasonal Changes	Our clothing and recreation are affected by the weather.
Space Relationships	People and places are located in space near, far, over and under.
Historical Events	Some days are "special days", e.g. holidays and birthdays.

THE TEACHER IS NOT EXPECTED TO USE THIS EXACT LANGUAGE, NOR ARE THE EXPERIENCES SUGGESTED THROUGHOUT THIS BULLETIN COMPREHENSIVE. MANY OF THESE ACTIVITIES ARE ON-GOING AND NEED REPETITION. THE EXPERIENCES ARE MERELY SUGGESTIVE. THEY MAY BE USED WITH INDIVIDUAL CHILDREN OR WITH A SMALL GROUP, RARELY WITH A LARGE GROUP.

	THE TEACHER	THE CHILDREN
THE CHILD AS AN INDIVIDUAL:		
Establishing a Good Self-Image	Greets each child individually when he first comes to class.	Aware that teacher likes him and wants him in the classroom.

1. Spodek, Bernard. Developing Social Science Concepts in the Kindergarten. Unpublished doctoral study, Teacher College, Columbia University, 1962.
2. Wann, Kenneth D., Dorn, Miriam S., Liddle, Elizabeth A. Fostering Intellectual Development in Young Children. New York: Bureau of Publications, Teachers College, Columbia University, 1962, p. 98.

	The Teacher	The Child
Each Person Is Important	Greets parent who brings the child.	Is aware that his parents are also important to the teacher.
	Makes a game of taking attendance. Sings, "Where is Selena, where is Selena?" Later in term teacher may use first and last names in song.	Child sings response, "Here I am, here I am."
		Learns to identify himself by entire name.
	Prepares a place for child's belongings. Permits him to choose a small picture for identification. Labels cubby with child's name and the picture he chose.	Is aware of belonging in the classroom, of having a special place to keep things.
		Identifies cubby by own picture label.
	Uses children's names in songs and games. "Where is (child's name)?" To Tune of "Thumbkin" "Here We Are Together"	Recognizes his own name.
		Becomes aware of names of other children in class.
	Uses children's names to distribute items. "Would you like a tambourine, Mary?"	
	Uses children's names in stories the teacher tells or reads incorporating child's own experience in the story.	Realizes that what he does makes an interesting story. Identifies with character in a story.
	Uses tape recorder to give children opportunities to hear their own voices. Uses children's names on tape.	Gains perception of how he sounds.
	Uses names in discussion. "Tell us about your cat, John." "Mary brought a book to show us."	Feels that what he has to contribute is important.
	Stimulates a sense of accomplishment.	Feels success in work.
	Encourages child to dress self. Provides tasks in which he can succeed, e.g., simple puzzle, gradually progressing to a more difficult one. Gives recognition and praise for tasks accomplished Displays child's work.	Reacts favorably and is inspired by his success and by teacher's and children's concrete recognition of his ability.
	Recognizes each child's birthday in some simple manner, e.g., letting him choose game, singing a birthday song to him.	Realize that each one's birthday is a special day to celebrate.
	Selects stories to help child establish his identity.	Identifies himself with the story characters.
	Includes stories with pictures of children of different ethnic groups, reflecting many cultures.	Develops sympathy with story characters.
	Ruth Krauss and Crocket Johnson Is This You?	
	Marjorie Flack, Wait For William	

Ezra Keats, A Snowy Day
Whistle For Willie
My Dog Is Lost

Zhenya Gay, Small One

J.P. Brown, Keiko's Birthday

Randall, Fun For Chris

THE CHILD AND HIS CLASSMATES:

	The Teacher	The Children
No Two People Look Alike	Fastens full length unbreakable mirror in housekeeping area. Encourages child to identify self in it.	Gain perception of self.
	Uses games in which children with some common characteristic (brown shoes or red sweaters, etc.) march around room.	Note likenesses and differences, e.g., boy or girl, tall or short, color of dress or sweater, etc. Are aware that everyone is not alike, there are some similarities.
People Have Different Talents	Encourages children to try many activities.	There are things for everyone to try.
	Some children can bounce a ball; some know songs to sing; some children can skip, etc.	Everyone can do something. It is fun to try even if one doesn't succeed the first time.
	A Spanish-speaking child helps to orient a new Spanish-speaking child to the classroom.	Appreciate ability to converse in another language.
People Do Different Work	Displays pictures of various community helpers.	Identify worker and tell something that he does. (Cumulative description of comments by individual children.)
	Invites to classroom as resource persons fireman, policeman, mailman, nurse, doctor, etc.	
	Who works in your family?	Some fathers work.
	What does your mother do?	Some mothers go out to work. Some mothers do the cooking housework and care for the babies at home.
People Have Different Tastes	Provides opportunities for making choices and decisions. Gives child ample time to select activity during free play.	Grow in assuming responsibility of selecting and returning materials.
	Encourages child to try a new activity or material.	Become aware of the many activities and materials. Desire to engage in a variety of activities.
	Encourages children to express preferences for songs, games, records and stories.	Enjoy singing songs, hearing stories, etc., he has chosen.
	During cooking experiences encourages but does not press children to taste foods new to them.	

	The Teacher	The Children
	Uses story, e.g., Peas, Beans and Chocolate Pudding to reinforce idea of eating a variety of food.	Are aware of varities of food other children like. Respect differences in tastes.
Differences Do Not Matter	Selects stories that reinforce concepts of differences, including stories reflecting many cultures.	
Stories	Ruth Krauss, I'll Be You and You Be Me Karla Kuskin, Just Like Everyone Else Cathleen Schurr, The Long and the Short of It Alf Evers, There's No Such Animal Marcia Brown, Rosita, A Little Girl of Puerto Rico The Little Fireman	Become familiar with and accepting of a variety of differences as exemplified in stories. Realize that some differences are not important.
Verse	Selects rhymes and verses emphasizing differences. Ivy O. Eastwick, No Drip of Rain Nursery rhyme; Jack Sprat Aileen Fisher, After A Bath	Enjoy humor of differences as shown by verse.
Pictures	Display Pictures of Children from many lands, UNESCO, For All The Children. To show that people in other countries often dress differently from us.	Observe and discuss differences of dress, etc. from that which we wear.
Rules in the Classroom	In order for children to feel the security that comes from reasonable, consistent limits, gives maximum opportunities for children to feel free to explore materials, to satisfy curiosity and to practice and develop competencies.	Feel free to use materials in classroom.
Limits	Limited supplies determine how many children can engage in the same activities at one time. "How many children can paint at the easel at one time?" Limited space limits the number of children who may use it. How many children may go into the housekeeping area at one time? Can you run around in the housekeeping corner?	Observe that all children cannot use the same thing at the same time. Learn that children may have a turn at another time. Make comments, e.g. "Only four children can play there comfortably. Let's make a rule to have only four there. Things get knocked over. It spoils the housekeeping corner if children run in there."

	The Teacher	The Children
Fire Drills	Tells the children that the gong is a signal for everyone to leave the building to practice getting out quickly in case there is ever a fire. Gives children security of knowing that an adult cares about them.	Contribute ideas, e.g. "Would not want to stay in school in case of fire. Would you want to be with the teacher. The gong is just like a rule. We want to be safe, so we follow the rule."
	Conducts practice fire drill.	Respond on drill as directed
Noise	When many people work and play in the same building, they cannot make as much noise as they would like.	
	Visit another classroom with children.	Walk with teacher to observe a first grade reading and writing to see children in the school library. Observe how quietly they work. Discuss the idea that loud noises would disturb them. Aware of need to limit noise for their sake.
	On return to class ask what they saw the other class doing.	
Rules for Trips	In planning trips, confers with children beforehand about rules for trip.	Participate in planning trip and in making simple rules for safety, consideration of others, etc.
Weather	Encourages children to notice kinds of weather.(Integrate with science for concepts of hot, cold, windy, snowy,etc.)	
	Plans to go outside.	Plan with teacher to go to schoolyard. Observe from window to note signs of weather. Decide what outer clothing would be most comfortable.
	How people dress in various kinds of weather, at different seasons.	
	Notes at coming and at dismissal the mittens, galoshes, sweaters, ear-muffs, etc. in winter. Notes lack of outer clothing in summer.	
Space Relationship In School	Plans trip through first floor to find some agreed upon place such as the principal's office.	
	Discusses route, e.g. down the hall, past the drinking fountain. On return encourages block play to show route.	Reinforce experience with block play of route.
Community: General Features of Location	Plans trip around block to see what buildings are near the school, general features of neighborhood. Encourages block play using toy cars, people etc. to recapitulate.	
Map Skills	Takes children to roof-playground of school or to high floor of school so that they can look down on street from above.	Look down on street.
	Points out familiar landmarks e.g. church, post office.	Notice how much farther away they can see than when they stand in street. Recognize familiar buildings
	Brings to children's attention that cars seem as small as toy cars.	Observe how small cars and people look.
	On return to class supply brown paper for streets.	Some children build block houses along street edge. Add toy cars, people etc.

	The Teacher	The Children
	Supplies materials as needed for other objects noticed e.g. flags, a river (use blue paper), boats, clay and sticks for making trees etc.	Make from art material some of the objects noted on trip and add to the scene.
	Encourages discussion and observation by individuals and group.	Observe, comment and evaluate, contribute to scene.
Historical Events	Brings to the children's attention that there will be no school on the following day (February 22). Tells that schools are closed because it is a holiday.	
	"What is a holiday?"	Response may be,"special day" or "school is closed", etc.
	"What special days have we celebrated together?"	Answers include birthdays, Thanksgiving, Christmas,etc.
	This special day is a birthday of our first president, George Washington.	
	Displays picture of George Washington. "Are his clothes like those your father wears?"	Observe picture carefully.
	"What is different?"	Notice type of trouser, ruffle, jacket, buckles on shoes.
	"Is his hair different?"	
	"He is wearing a wig because it was the style long ago for men to wear wigs. Who wears wigs today?"	Some children have mothers, aunts etc. who wear wigs.
	"If George Washington were alive today, do you think he would dress like this? Would he wear clothes like your father?"	Agree that he would dress as other men do today.
	Shows picture of present president. "What is his name?" (Assists children to identify by name.)	Respond with name.
	"Who is he?"	Recognize the president.
	Displays the two pictures side by side. "How can you tell that George Washington lived long ago?"	"His clothes are different."
	Selects pictures of Martha Washington and of children dressed in clothes of Washington's time. Encourages children to notice differences in how ladies and children dressed long ago and today.	Observe ladies' clothes of long ago.
		Observe articles of clothing children wore long ago.

Suggestions for Trips

Trips Within the School Building

Visit the principal's office
general office
nurse
library
custodian
boiler room
gymnasium
auditorium
lunchroom
science room

Walk through the halls to see bulletin board displays.

Walk through the building to see other classes at work.

Take children to school exhibits and programs e.g. book fair, science fair, cake sale, appropriate assembly program, film.

Trips Around the School Block

There are several ways to walk around the block e.g. different directions, different exits and entrances.

Observe neighboring buildings, stores, parking lots, construction sites, garage and filling stations, children's homes.

Observe traffic lights and signs.

Look for things on the ground, e.g. puddles, shadows, insects.

Look for things in the air, e.g. clouds, airplanes, television aerials, birds.

Trips In the Neighborhood

Visit local stores e.g. grocery, fish store, fruit and vegetable store, supermarket, shoemaker, butcher, florist, pet shop, chicken market, laundry.

Visit lumber yard and carpenter shop.

Visit post office.

Adopt a neighborhood tree as a "class tree" and observe changes during each new season.

Look for things that move.

Name kinds of trucks and other wheeled vehicles.

Short Bus Trips

(depending on location of the school)

Zoo
Ferry ride
Picnic area
Beach
Museums and children's museum
Airport
Bridges
Docks and piers
Aquarium
Botanical gardens

VII
OPENING UP THE WORLD OF SCIENCE

PURPOSES

Children are natural scientists with a continuing "why" on their lips. Their drives lead them

to question - about their concerns and curiosities
to investigate - to see what happens if .....
to manipulate - with fingers, arms, legs, and total body
to observe - with all their senses
to classify - by collecting, selecting, grouping and comparing
to report - by telling and "showing"

A variety of satisfying motor-sensory experiences with the materials and structures in their environment help children acquire simple science concepts which aid them in understanding and adjusting to their environment.

Children's horizons are extended by introducing them to new materials, new experiences, and by showing new ways of investigating with familiar materials. *".....we need to take a fresh look at materials, considering them as a means not only of self-expression but also as a child's media for discovery about himself and about the world around him, as the apparatus for basic experimentation within the framework of a creative atmosphere. Materials, then, are among the tools with which the child works out concepts. Through these concrete experiences the intellectual concepts take form and prepare him for the comprehension of the abstract."

The program provides a variety of basic experiences for children of differing abilities and talents and compensates for variations in their backgrounds by assuring them a reservoir of common understandings. It provides the kind of experiences which encourage non-verbal children to participate with satisfaction in the school program, and stimulates oral expression.

Science explorations that are fun, and tools of science that are playthings introduce children happily to science content in areas which will be extended through their elementary school program. These areas include: Magnetism and Electricity, Earth in Space, Living Things, Sound and Light in Communication, Weather, Motion and Force in Transportation, and Earth and Its Resources.

ORGANIZATION OF THE PROGRAM

The theme for each topic is developed through a series of problems. Children and teachers will follow these main leads, and go off on many side-paths from them. In the development of each problem, the role of the teacher and of the children is indicated. Children work alone, in small groups, or with the entire class. Children are helped to acquire social skills by working together in groups when the problems presented are "solved" best by group activity.

SCOPE

The following topics suggest the content and the approaches to science for young children. The first four topics - All Kinds of Weather, Science in a Sandbox, Science in Wheels, Science in Blockbuilding - are developed in detail in the material which follows Scope. For the remaining nine topics, the teacher will be guided by the suggestions listed under each.

All Kinds of Weather

...a windy day
...a snowy day
...a rainy day

Science in a Sandbox

...pouring sand
...building hills
...looking at sand through a magnifying glass
...mixing sand with water
...sifting sand
...making mud pies
...comparing wet sand and dry sand

*Creative Activities for Young Children by Charlotte B. Winsor, 69 Bank Street Publications, Bank Street College of Education.

Science in Wheels

...all kinds of wheels; big and small
...trips to see wheels
...wheels in various toys and equipment
...using wheels in transportation
...turning wheels; faster and slower
...what makes wheels go; wheels slow down and stop

Science in Blockbuilding

...playing with blocks
...balance and stability
...structures and design
...building high structures
...knocking blocks down

Moving Your body

...possibilities and limits of body motions
...how to use parts of the body (head, arms, legs, eyes, mouth) for different purposes

Science in Sounds

...making sounds; loud and soft; clapping
...hearing sounds - through the air, the ground, the table
...outdoor sounds and indoor sounds
...crash of falling blocks

Science in Cooking

...stirring, measuring, heating
...changes observed: sounds, shapes, aromas, sizes, colors, quantity
...foods prepared: applesauce, cocoa, jello, cranberries, popcorn, puddings, candy, jelly apples, vegetable soup

All Kinds of Pets

...turtles; fish; visiting pets
...differences and similarities
...how pets eat and move
...sounds pets make
...body parts of pets
...holding and touching pets

What a Magnet Can Do

...use a single magnet on small things and on any objects around the room

Science in a Pan of Water

...pouring water
...sinking and floating objects
...blowing on the surface to make waves

Seeds and Plants

...different kinds of seeds
...planting seeds
...seeds sprout
...tiny plants
...watering soil (job of watering plants); sun

Science in Collecting

...observation, classification, arrangement, identification
...trips to find leaves; variations and similarities in color, shape, size
...rock trips

Things That Fly

...birds, airplanes, toys, kites, gliders, insects
...wind makes things fly ——papers, hats

ALL KINDS OF WEATHER

Weather plays an important role in the lives of young children. It affects their activities, the clothes they wear, and even their health. Changing weather provides endless opportunities for exploration and discovery on the very day it occurs.

The activities in this unit are designed to help the teacher draw on the unique ways in which young children respond to weather and to heighten their awareness of weather phenomena. Only windy, snowy and rainy days are developed here. The teacher may use similar approaches for cloudy, foggy, freezing cold and very hot days.

From the activities suggested, children learn the following:

Wind pushes and carries things.
Snow is cold.
Snow melts when it is warmed.
Snow melts to become water.
Rain is water.
Rain makes things wet.

A. A WINDY DAY

1. HOW DO WE KNOW IT IS WINDY TODAY?

The Teacher	The Children
Takes children outdoors on a windy day. Asks: What can you see the wind doing?	See such evidences as the flag blowing, papers and leaves flying, people holding on to hats, hair and clothing being blown.
	Comment on what they observe.
Asks: Can you hear the wind?	Listen to sounds made by the wind as it rustles the leaves, howls through alleys, whips around corners and streams around poles.
Asks: How does the wind sound?	Imitate the sounds they hear.
Asks: Can you feel the wind?	Tell how the wind feels as it blows on their faces, through their hair, and against their clothing.
Suggests in playground that children run with the wind and run against the wind.	Walk or run with the wind, and against the wind. Comment on how it feels.

Understandings

Wind moves many things.
We can hear the wind.
We can feel the wind.

2. WHAT DOES THE WIND DO TO OUR TOYS?

The Teacher	The Children
Brings outdoors wind toys such as: kites, balloons on strings, crepe paper streamers on sticks, soap bubble mixture with wands, and pinwheels.	Play freely with the toys. Observe the fast movement of the pinwheel and listen to the sound it makes.
NOTE: Only one or two of these objects, at the very most, are taken out on any one day.	See evidences of the wind as other objects are blown in one direction.
Asks: Can you find a place where wind is not blowing?	Discover that the walls of the schoolyard, or the building offer shelter..

The Teacher	The Children
Asks: What is your toy doing now?	Look at their toys and notice that little or no movement takes place.

Understandings

The wind makes some toys spin.
The wind makes some toys move in the air.
When there is no wind some toys stop spinning and moving.

B. A SNOWY DAY

1. WHAT CAN WE DO WITH SNOW OUTDOORS?

The Teacher	The Children
Takes children outdoors for a short time for explorations with snow.	Play freely with snow. Some children make footprints in fresh snow; some scoop it up with their hands; some pack snow to make a snowman; others make snowballs.
Provides play materials such as shovels and pails for the snow.	
If it is snowing, asks: How can you catch a snowflake?	Try catching snowflakes in their hands, on their clothing.
Asks: What happens to snowflakes after they land on your face, or in your hands?	Talk about the wet, cold spots left by fallen snowflakes.
Asks: What happens when you pick up snow and hold it in your hand?	Pick up some snow and hold it in their hands for a short while. See the wet spot on the hand. Feel that their mittens are cold and wet.

Understandings

We can build a snowman with snow.
We can make tracks in the snow.
We can catch snowflakes.
Snow feels cold.
Snow makes things wet.

2. WHAT CAN WE DO WITH SNOW INDOORS?

The Teacher	The Children
Takes children outdoors. Provides a pail or deep pan (preferably polyethalyne) for collecting snow.	
Asks: How can we bring snow indoors?	Suggest different ways. Fill the pail or pan that is provided, and carry it into the classroom.
Puts oilcloth on each table for protection, and provides children with plastic or paper cups and spoons.	
Invites children to fill their cups with snow. Emphasize that each cup should be filled to the top.	Fill cups up to the top and carry them to their tables.
Asks: How does snow look; how does it feel?	Comment on appearance and feel of snow by touching it, and by holding the cup.
Asks: What do you thing will happen to the snow in your cup?	Guess what will happen.
Suggests that children look at their cups of snow from time to time.	

The Teacher	The Children
Asks: What is happening to the snow in your cup?	Comment on changes as snow melts into water. Compare the contents of their cup with that of their classmates.
When snow is all melted, asks: Does the water come up the very top of your cup?	Discover that a full cup of snow melts into less than a full cup of water.

Understandings

Snow will melt in warm indoors.
A full cup of snow will melt into less than a full cup of water.

C. A RAINY DAY

1. WHAT HAPPENS ON A RAINY DAY?

The Teacher	The Children
Have the children go to a window on a rainy day to observe what is happening outdoors.	
Asks: What can you see the rain doing?	Look and tell about: rain hitting the window panes; rain splashing and bouncing on the sidewalks; puddles; leaves and trees getting wet; rain splashing on umbrellas; cars, buses and trucks getting wet; cats and dogs getting wet (and shaking off the water); packages getting wet; and walls of buildings getting wet.
Asks: What can you hear when it is raining?	Listen and dramatize the sounds they hear: rain tapping on the window panes; the swish of cars and trucks as they splash through water in the gutters.

Understandings

We can see rain fall and make things wet.
We can hear the raindrops make sounds when they hit things.

2. HOW CAN WE COLLECT SOME RAIN?

The Teacher	The Children
On a rainy day, asks: How can we catch some of the rain?	Suggest various kinds of rain catchers: hands, trays, cups, glasses.
Places an empty pan in some safe place outside a window where rain will fill it.	
Asks: What is happening in the pan?	Comment.
	Some raindrops are falling into the pan, some are not.
	We can hear the rain falling into the pan.
Brings the pan containing some rainwater indoors. Pours contents of pan into an empty glass.	
Asks: What is in the glass?	Some may say "rain", others may say that it looks like water.
Takes another glass, of the same size, and fills it with tap water (same amount as the rainwater).	

The Teacher	The Children
Asks: Does the rain we collected look like the water we drink?	Comment on similarities.
Asks: Does the rain feel like water?	Take turns dipping fingers into each glass. Discover that rain is water.
Asks: Were you ever caught in the rain?	Comment on what happened to them: Clothing got wet; feet got wet; felt cold, etc.

Understandings

We can catch rain.
Rain looks and feels like water.
Rain is water.

3. HOW DO THINGS LOOK OUTDOORS AFTER THE RAIN?

The Teacher	The Children
Takes the children for a walk outdoors after a rainfall.	
Asks: What has the rain done?	Observe and comment: streets are wet; puddles on the ground; raindrops are dripping from awnings and store windows; papers and other objects on the street are soaking wet.
Takes the children to the playground.	
Asks: What has the rain done here?	Discover that all the equipment is wet and hard to use.

Understandings

Some things look different after the rain.

Children As Discoverers

While children are engaged in the activities related to "All Kinds of Weather", they are:

Observing — As in Problem A1, when they note evidences of wind blowing. As in Problem C3, when they take a walk to see what rain has done on the street.

Predicting — As in Problem A2, when they predict what will happen to the snow in their cups.

Comparing — As in Problem C2, when they compare rain water with tap water.

Measuring — As in Problem B2, when they discover that a full cup of snow melts into less than a full cup of water.

Reporting — As in Problem A1, when they tell how the wind feels.

Generalizing — As in Problem C2, when they conclude that rain is water.

SCIENCE IN A SANDBOX

The work in this unit is based on the nature of children and the nature of sand. Children enjoy playing with sand because they can dig into it, mold it, pour it, and build with it. Sand is a satisfying material since it can retain its shape or form to some extent. Sand is also fascinating because it changes in color, in consistency, and in the way it can be handled when it is wet.

From the activities suggested, children learn the following:

Sand can be poured.
Sand can be built up into a hill.
Sand is made of many tiny grains.
Wet sand holds imprints.
Wet sand can be patted into different shapes.
Wet sand can be molded into different forms.
Dry sand pours more easily than wet sand.
Wet sand sticks together better than dry sand.

1. HOW CAN YOU FILL A PAIL WITH SAND?

The Teacher	The Children
Clears the sandbox or sandtray of all toys and other objects.	Feel sand, scoop some up with their hands and allow it to sift through their fingers. Comment on how the sand feels and what the sand does.
Adds the following to the sandbox: spoons, shovels and pails.	A small group of children work the sandbox or sandtray. Play freely with the objects in the sandbox, filling and emptying their pails.
How can you fill your pail?	Fill their pails in different ways using one hand, two hands, spoons or shovels. Some children may use the pail itself to scoop up the sand.
Asks each child: How did you fill your pail?	Reply by naming the tool they used or by showing it, or both.
Has the children lift their pail of sand. How does it feel?	May comment that the pail feels heavy or that it is hard to lift.
Presents an empty pail to the group.	Each child in turn lifts the empty pail with one hand and his full pail with the other.
Asks: Which feels heavier, the empty pail or the pail filled with sand?	Comment on the difference.

Understandings

Sand can be scooped up with a hand, a spoon, a shovel.
Sand can be scooped up more easily when the hand is cupped.
There are different ways of filling a pail.
A pail full of sand is heavier than an empty pail.

2. CAN YOU BUILD A HILL WITH SAND?

The Teacher	The Children
Clears the sandbox of all objects. Sand must be dry. Asks children to build a hill.	A small group of children build hills by picking up sand with their hands and piling it, or by pushing sand together with both hands.
Adds sticks, spoons and shovels to the sandbox.	Use play tools for piling sand, and for smoothing and patting the hill. Knock their hills down and rebuild them several times.

The Teacher	The Children
Asks children to build higher hills.	Add more sand to their hills. Observe that when their hill is steep, sand slides down.
Clears the sandbox of all objects. Divides the sandbox in half with blocks. Sprinkles water over one-half of the sandbox.	Play freely with wet sand.
Asks: How does wet sand feel?	Comment on the change in the way sand pours, sticks together, and how well it retains impressions of fingers, hands, and objects pressed into it.
Asks each child to build one hill with wet sand and one hill with dry sand.	Compare wet and dry hills with reference to: size, shape, ease of building, and how well they hold up, and how easy they are to knock down.

Understandings

We can make hills from wet and dry sand.
When a sand hill is steep, the sand slides down.
We can build big hills and small hills.
Wet sand sticks together better than dry sand.
Wet sand is better than dry sand for making hills.
Wet sand holds imprints better than dry sand.

3. HOW CAN WE CLEAN UP OUR SANDBOX?

The Teacher	The Children
Makes available a variety of small objects such as: spoons, pebbles, and tongue depressors.	Play freely with sandbox, or sandtray, and small objects.
After a work-play period, asks: How can we get the toys out of the sandbox?	Suggest or show various ways, such as taking them out one at a time.
Asks: How can we take out the things that are too small to be picked up with our fingers?	May suggest using a sifter.
Provides sifter and asks: How can we use the sifter to get the tiny things out of the sandbox?	Demonstrate method of sifting. Take turns sifting.
Asks: Can you hear anything when you shake the sifter?	Listen and imitate the "swishy" sound they hear.
As children continue to use sifter, asks: What goes through the sifter?	Become aware that sand goes through the holes of the sifter.
Asks: What does not go through the sifter?	Collect, examine, and put to one side the objects that remain in the sifter.
Asks: Why did the sand go through the holes of the sifter?	May say that the objects left in the sifter are too big, or that the sand "slips", "slides", or "runs" through the holes.

Understandings

A sifter can be used to clean a sandbox.
Sand can slip through the holes of a sifter.
Some things are too big to slip through the holes of a sifter.

4. WHAT DOES SAND LOOK LIKE THROUGH A MAGNIFYING GLASS?

The Teacher	The Children
After a sand sifting experience, asks: Can you show me a tiny bit of sand?	Try to pick up grains of sand with their fingers.
Provides children with paper plates. Asks: How can you get the sand from your finger on to the plate?	Brush small amount of sand from their finger on to the plate.
Asks: How can we see the tiny bits (grains) of sand better?	Spread the sand on their plates and examine it closely.
Asks: How can we see each tiny grain of sand better?	
Provides a giant stand magnifier, or large hand magnifiers. Assists children, where needed, to focus hand magnifiers.	Take turns examining sand with giant stand magnifier, or use individual hand magnifiers.
Asks: How does sand look through a magnifying glass?	Comment on color and size.

Understandings

Sand is made of many tiny grains.
Tiny grains of sand look bigger through a magnifying glass.
We can see the different colors of sand with a magnifying glass.

5. WHAT CAN WE DO WITH WET SAND?

The Teacher	The Children
On a day when the sand is dry, asks: How can we make a sand pie?	Collect various aluminum molds found in the room and bring them to the sandbox.
	Try to make pies with dry sand and discover that they fall apart.
Asks: How can we make a sand pie that will not fall apart?	Suggest wetting the sand.
Provides a sprinkling can.	Sprinkle water over the sand and use their hands to mix the water with the sand.
	Make pies using moist sand. Comment on their success.
Asks: What else can you make with wet sand?	Some may make castles; some may make hills; and others may make pancakes.

Understandings

Wet sand sticks together better than dry sand.
We can make pies, pancakes, and build castles with wet sand.

Children As Discoverers

While children are engaged in the activities related to "Science in a Sandbox" they are:

Observing	As in Problem 2, when they see sand sliding down steep hills.
	As in Problem 4, when they examine sand with a magnifying glass.
Experimenting	As in Problem 5, when they try to make better sandpies by wetting sand.

Classifying	As in Problem 2, where they identify hills of different sizes.
Comparing	As in Problem 1, when they compare a pail of sand with an empty pail.
	As in Problem 2, where they try to find out whether wet sand makes a better hill than dry sand.
Reporting	As in Problem 2, when they display the hills they have made.
	As in Problem 4, when they tell what sand looks like under the magnifying glass.
Generalizing	As in Problem 3, where they surmise that small things can go through a sifter.

SCIENCE IN WHEELS

Children are aware of wheels even before coming to school. Many of them may have already investigated wheels on such toys as wagons, trains, skates, and doll carriages. In order to provide opportunities for all children to observe, manipulate, experiment and discover, the activities in this unit lead children to first explore the wheels found in their classroom and then to look for their counterparts in the world outside.

From the activities suggested, children learn the following:

Many things move on wheels.
Some wheels are big; some wheels are small.
All wheels are round.
Wheels turn around.

1. WHAT THINGS MOVE ON WHEELS IN OUR ROOM?

The Teacher	The Children
Asks: What can you find in the room that has wheels?	Look for objects with wheels and bring them to a designated place.
Asks: What did you find?	Name the object as they hold it up for display. Objects may include: cars, trucks, wagon, cart, doll carriages, tricycles, wheelbarrow, trains, utility table.
Asks: Which toy has the biggest wheels?	Find and place to one side of the collection the toy with the biggest wheels.
Asks: Which toy has the smallest wheels?	Find and place to another side of the collection the toy with the smallest wheels.
Asks: What shape do wheels have?	Tell, or show with hands, that wheels are round.

Understandings

Many things in our room move on wheels.
Some things have big wheels.
Some things have small wheels.
All wheels are round.

2. WHAT CAN THE WHEELS ON OUR TOYS DO?

The Teacher	The Children
Places a number of toys with wheels on a table. Selects one toy at a time and asks: How can we move this toy?	Takes turns pushing toys back and forth.
Asks: What happens to the wheels when you push or pull your toy?	Tell or show that wheels turn.
Asks: How else can you make wheels turn?	Suggest different ways. Some children may turn a toy upside down and spin the wheels.
Asks: How can you make wheels go very fast?	Suggest different ways. Some children may select a toy from the table and show that wheels go very fast when you give them a hard spin, or when you pull the toys fast.

Understandings

Wheels turn around.
Toys with wheels can move back and forth.
We can make wheels turn very fast if we give them a hard spin.

3. WHAT WHEELS CAN WE SEE ON OUR STREET?

The Teacher	The Children
Takes children outdoors for a walk. Asks: What can you see that has wheels?	Name the many vehicles in the street: cars, trucks, buses, delivery carts, wagons, carriages, skates.
Asks: What has big wheels? What has small wheels?	Comment on the size of wheels they see on objects in the street.

Understandings

We see many things with wheels on our street.
Some things have small wheels.
Some things have big wheels.

Children As Discoverers

While children are engaged in the activities related to "Science in Wheels", they are:

Observing	As in Problem 3, when they name the vehicles they see in the street that move on wheels.
Experimenting	As in Problem 2, when they find that a wheel goes faster when it is given a harder push.
Classifying	As in Problem 1, when they collect objects in the room which have wheels.
Comparing	As in Problem 1, when they look for largest and smallest wheels in their collection.
Generalizing	As in Problem 1, when they conclude that wheels are round.

SCIENCE IN BLOCKBUILDING

Blocks are one of the most useful and creative tools for the self-education of young children. They provide manipulative experiences which encourage verbal and non-verbal children to create and to express their thoughts. What often appears as haphazard building may, in reality, be a reproduction of a child's experience.

But blockbuilding goes beyond this. The freedom with which children can group, manipulate, arrange, stack and knock down blocks provides opportunity for experimentation with new forms and new structures. Children become aware of certain building principles, and learn to recognize and classify the many sizes and shapes of blocks. It should be noted, however, that the acquisition of concepts will occur at different times throughout the year for individual children.

From the activities suggested, children learn the following:

A high pile of blocks will fall more easily than a low one.

A carefully stacked pile of blocks is steadier than one that is not stacked carefully.

A block with a broad base will hold a pile of blocks better than a block with a narrow base.

Blocks come in different shapes and sizes. We can match blocks with those that look the same.

1. HOW HIGH CAN YOU BUILD?

The Teacher	The Children
At the beginning of the year, introduces children to blocks for work-play periods.	Play freely with a variety of blocks.
Observes a small group of children in their blockbuilding activities. After a series of crashes, asks: How high can you build without having a crash?	Estimate different heights with their hands.
Provides each child in the group with 12 identical rectangular solid blocks. Asks: How high can you build without having a crash?	Build a variety of structures.
When a crash occurs, asks: why do you think your building crashed?	Some may comment that they piled too many blocks on top of each other; some may say that the blocks were not carefully stacked , and others may say that the blocks on the bottom were too small to hold all the blocks.
Asks: How can you build without having a crash?	Rebuild structures. Experiment with different block arrangements and avoid previous errors (after many experiences).

Understandings

A low pile of blocks will not fall and crash as easily as a high pile of blocks.
A pile of blocks will not crash if we stack them carefully.
A pile of blocks resting on large blocks will not crash as easily as a pile of blocks resting on small blocks.

2. HOW CAN WE PUT OUR BLOCKS AWAY?

The Teacher	The Children
On one occasion, when a group of children have finished playing with blocks, asks: What is a good way of putting the blocks back on the shelves?	Suggest different ways of putting the blocks away.
Calls attention to the assortment of blocks on the floor. Asks: Do all the blocks look the same?	Comment on the different sizes and shapes of the blocks.
Selects 2 or 3 blocks of one kind and places them on a shelf. Asks: Can you find any blocks that look like those on the shelf?	Select and pick up blocks that look like those on the shelf?
Asks: Where do you think we should put the blocks you are holding?	Some may suggest that the blocks be placed on the same shelf as those already there.
Directs children to put their blocks on the shelf in the right place.	Stack blocks neatly.
Repeats above with each kind of block.	Select, match and stack blocks.
Asks: How can we remember where to put the blocks when the shelves are empty?	Suggest different ways.
Makes a drawing of each block and attaches it to the appropriate shelf. Asks: How can these pictures help us when we put our blocks away?	Comment on how they can match each block to its corresponding picture.

Understanding

Blocks come in different shapes and sizes.
We can match blocks that look the same.
We can keep all blocks that look the same in one place.
We can match a block with a picture to help us remember where the block belongs.

Children As Discoverers

While children are engaged in the activities related to "Science in Blockbuilding," they are:

Observing	As in Problem 2, when they match blocks with pictures of blocks.
Experimenting	As in Problem 1, when they test the stability of different block arrangements.
Predicting	As in Problem 1, when they estimate how high they can build with their blocks.
Classifying	As in Problem 2, when they store blocks of the same size and shape in one place.
Comparing	As in Problem 2, when they comment on the different sizes and shapes of blocks.

VIII
Developing Mathematical Concepts

Children in the Pre-kindergarten have been developing mathematical concepts over a period of four years. These concepts have grown out of home-living experiences. Since no two children could have had identical experiences, the mathematical concepts of the children who come to school are necessarily at widely varying levels of development.

The Pre-kindergarten teacher makes plans to provide a commonality of school experiences similar to home experiences from which children's mathematical concepts will grow. Such experiences provide innumerable opportunities for teaching and learning mathematics, e.g., names for numbers, one for you and one for him, how many there are, shape of the carton or block or cookie, one-half of a sandwich, etc. Although mathematics is developed at this level through significant children's experiences the teacher is continually aware of what mathematics it is that is being taught to a child or a group of children. More particularly, the teacher makes every effort to find out what the children are learning.

SCOPE AND SEQUENCE

The Pre-Kindergarten mathematics program is organized around seven broad topics as follows:

Topic 1. Number Names
Topic 2. One-to-One Correspondence
Topic 3. Recognition of the Number in a Set and Its Subsets Without Counting.
Topic 4. Counting.
Topic 5. Geometric Concepts
Topic 6. Concepts of Capacity; Concepts of One Half
Topic 7. Number Line Concepts

SUGGESTED EXPERIENCES AND MATERIALS

The teacher makes plans for the teaching of mathematics to small groups of children as they work and play together in school. Pre-kindergarten children need to handle and study a great many objects. Suggested lists of school experiences and materials for children to touch and move are listed for each of the Pre-kindergarten mathematics topics in the chart following:

Topics	Suggested Experiences	Suggested Pupil Materials
1.	Listening to rhymes and stories	
	Reciting rhymes	
	Trips in school and neighborhood	
	Health activities	
2.	Classroom routines	Clothing, supplies, etc.
	Games	Pegs, pegboards, forms, formboards
	Dramatizing "The Three Bears," etc.	Bowls, chairs, puppets, wedgies, etc.
	Library activities	Pictures, picture books, etc.
2,3,4	Construction activities	Buttons, wheels, bottle caps, discs, etc.
	Science activities	Small stones, shells, nuts etc.
	Snacks, parties	Cookies, milk containers, trays, pennies, etc.
5.	Rolling games	Balls, oranges, cans, etc.
	Blockbuilding	Blocks, cubes, cartons, boxes, etc.
	Constructing collages	Colored paper cutouts

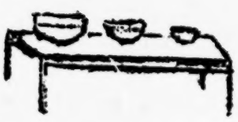
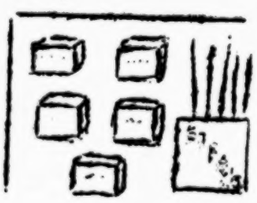
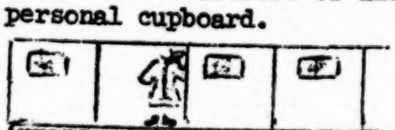
Topics	Suggested Experiences	Suggested Pupil Materials
5.(Cont.)	Modelling	Clay, plasticine, play dough
	Painting	Brushes, jars, paints, etc.
6.	Play	Transparent containers, sand, water, gravel play dough, etc.
	Planting	Seeds, earth, bulbs, etc.
	Parties	Apples, cake, etc.
7.	Blockbuilding	Blocks
	Science activities	Wheels, carts, construction paper, etc.
	Making designs	Potato stamps
	Tight-rope walking	

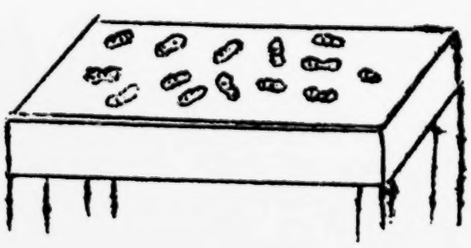
MATHEMATICAL CONTENT, TEACHER PREPARATION, AND PUPIL ACTIVITIES

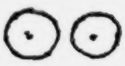
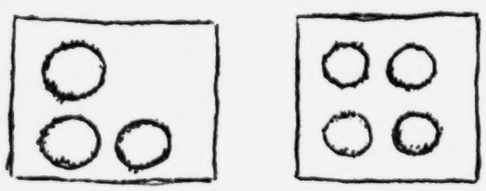
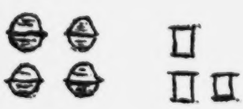
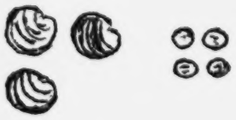
The chart following lists content for each of the seven topics to be developed at the Pre-Kindergarten level. Under the heading Teacher Preparation are suggestions relative to things for the teacher to do before she works with the children. Under the heading Pupil Activities are typical mathematical activities stated from the point of view of a child.

The teacher will note that all counting to find how many there are is deferred until Topic 4, and that counting is developed as accumulating collections.

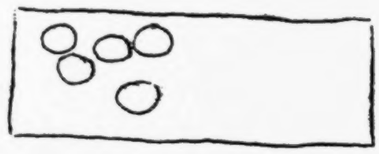
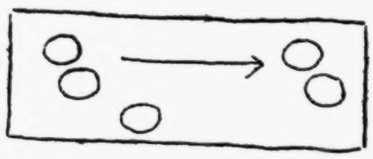
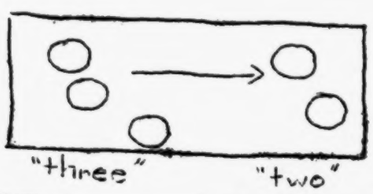
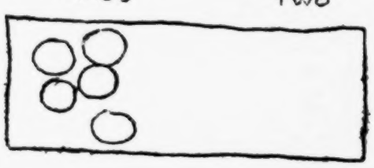
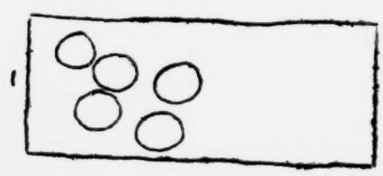
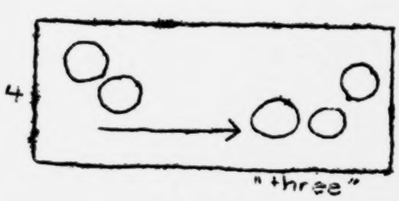
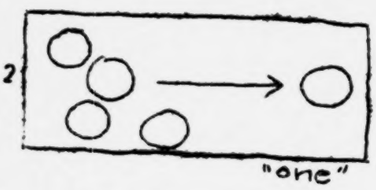
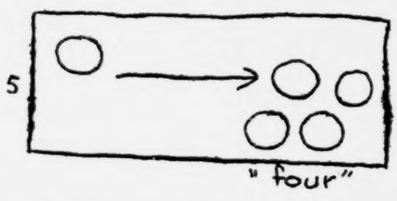
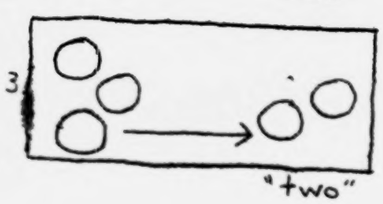
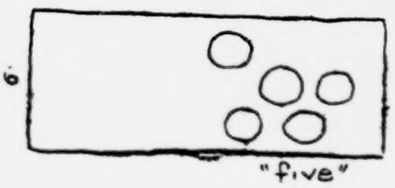
Content	Teacher Preparation	Pupil Activities
1. NUMBER NAMES	(See "Suggested Experiences," p. 1.)	
Stories, Jingles, Rhymes	Selects appropriate stories, jingles, and rhymes which involve number names.	Repeats number names heard, e.g., 4 and 20 (Sing a Song of Sixpence), etc.
Signs	Makes an inventory of signs with numerals in class, school, and neighborhood.	Observes numerals as presented on signs.
201	Prepares signs with number names for: Room, class, exit, and school numbers. House and street numbers. Etc.	Listens to number name given by the teacher. Repeats each number names immediately after the teacher says it.
Personal Data	Examines records for each child's personal data. Height 35 in. Weight 36 lbs.	Learns number name for age. Repeats number name for weight, height, etc., after the teacher says it.
Digits	Prepares lists of 2 digits, e.g., digits in numeral for school number, for number of pounds in weight, etc. Prepares lists of 3 digits, e.g., digits in numeral for room number, etc. Etc.	Repeats sets of two digits, e.g., four-six, eight-nine, etc. Repeats, if he can, sets of three digits, e.g., one-oh-three, one-three-oh, etc. Etc.

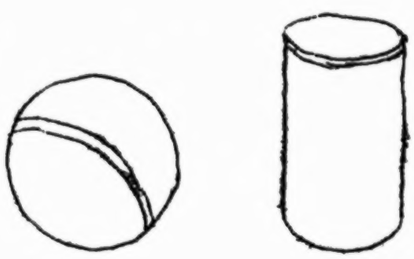
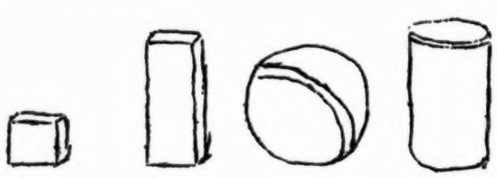
Content	Teacher Preparation	Pupil Activities
2. ONE-TO-ONE CORRESPONDENCE	(See "Suggested Experiences" and "Suggested Pupil Materials," p. 1)	
One Object for One Child	Prepares material for distribution: cookies, party hats, etc.	Learns to distribute one object to each child in his group.
	Arranges chairs for an activity, e.g., for a rhythm band.	Learns to identify his own seat when he returns after leaving it.
	Displays children's drawings, paintings, etc.	Locates his own drawing or painting, etc., among those displayed.
	Reads story of "The Three Bears," etc. Prepares bowls, chairs, etc. for dramatization.	Identifies proper bowl, sits on the proper chair, etc.
	Selects or constructs hand puppets, stick puppets, etc., for dramatic play.	Chooses appropriate puppet for the part.
One Object with a Related Object	Prepares trays with sets of materials: straws and milk containers, brushes and paint jars, balls of clay and mats, etc.	Learns that one straw goes with one container, that one brush goes with one jar of paint, etc.
	Pastes an identifiable picture for each child above his hook in wardrobe or his personal cupboard.	Establishes as a routine: hanging his coat on his own hook, placing his rubbers under his coat, using his own cupboard for his supplies, etc.
	 Arranges cookies on a tray.	Pays one penny for one cookie, i.e., gives the teacher a penny and receives one cookie in exchange.
	Selects sets of objects of 2 or more colors: red blocks, beads, triangular cut-outs, paper discs, pegs, etc.; yellow flower pots, beads, rectangular cut-outs, cardboard discs, etc.; etc.	Finds an object the same color as the one shown and named by the teacher.
One Mark for One Guess (Probability)	Selects several objects small enough to hold in one hand: a marble, a penny, a bead, a checker, etc.	Guesses in which hand the object is held by the teacher. Points to the hand.
	Prepares a score card to record correct and wrong guesses, e.g.:	Observes mark made by the teacher: / for a correct guess, 0 for a wrong guess.
	Correct / Wrong / 0 / 0 / 0 / 0 etc.	(Note: Teacher will continue until both lists are the same length.)
		Notes that the number of marks is the same for correct and for wrong guesses.
One-by-One of a Set in a Place	Places in a toy center: pegs and pegboards, simple forms and formboards, etc.	Places each peg in one hole.
		Observes forms and formboard. Learns to select correct form and to place this in formboard.

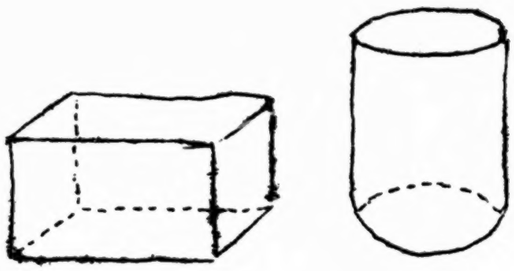
Content	Teacher Preparation	Pupil Activities
One Object with Its Name and Color	Collects and displays familiar objects: cups, spoons, forks, napkins, pencils, crayons, oranges, bananas, balloons, etc.	Repeats each name of object immediately after teacher says it.
	Selects pictures, each illustrating one or two familiar objects, animals, etc.	Repeats name of color of colored object immediately after teacher says it.
		Finds object named by the teacher.
		Matches objects of the same class, e.g., the bananas, the balloons, the cups, etc.
		Matches objects of the same color, e.g., red balloon, red crayon, etc.
3. RECOGNITION OF THE NUMBER IN A SET WITHOUT COUNTING	(See "Suggested Experiences" and "Suggested Pupil Materials," p. 1.)	
Number in a Pair	Provides clothespins or clips for pairing rubbers, boots, etc.	Clips his own rubbers together. Places these on the floor beneath his coat.
	Makes up a rhyme about two in a pair, e.g.: Two in a pair, Both rubbers are there.	Repeats rhymes about pair, both, two.
		Observes pairs of rubbers, etc., on a trip with teacher and a small group of children to the wardrobe.
		Learns that there are two rubbers in a pair (no counting).
	Arranges pairs of objects on a table, e.g.: mittens, shoes, socks, etc.	Learns to say: <u>both</u> rubbers, a <u>pair</u> of shoes, <u>two</u> shoes, etc. (<u>No</u> counting)
	Arranges sets of two, three, and four objects, e.g., a pair of rubbers, sets of cookies on trays for snacks, sets of beads in cans for stringing, etc.	Points to all sets of two objects.
		Names sets of two objects, e.g., 2 rubbers, a pair of rubbers, 2 cookies, etc. (No counting)
Number in Sets of 3 Objects	Provides a collection of peanuts in shells for a party. Spreads these on a table.	Picks up two peanuts at once (without counting).
		Shows the two peanuts and names the number he picked up. (Teacher also says the name "2".)
		Moves at once and then picks up three peanuts.
		Shows the three peanuts and names the number he has picked up. (Teacher says the name "3".)
	Provides a science collection of stones, shells, nuts, etc.	Arranges objects in sets of 3 each (no counting).

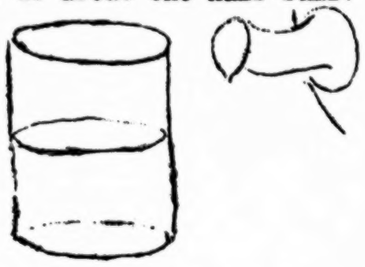
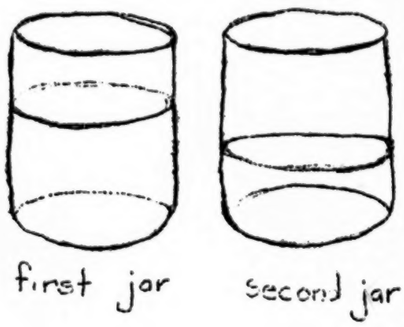
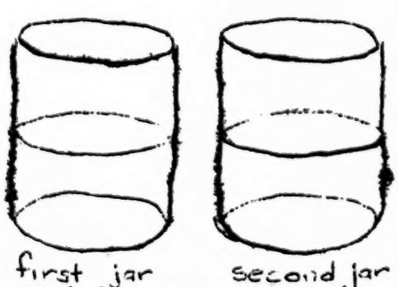
Content	Teacher Preparation	Pupil Activities
		Names the number in each set. (Teacher also says the name "3".)
	Arranges sets of two, three, and four objects for construction activities: pairs of wheels, buttons, one-inch cubes, beads in jar covers, bottle caps, milk containers, boxes, etc.	Points to all sets of 2 objects, 3 objects, etc. Names the number in each set of objects.
	Arranges a set of 2 objects and a set of 3 objects, e.g., cookies for snacks.	Names the number in each of the two sets. Observes which set has more cookies and which set has fewer cookies. Notes how many more cookies there are in the set of 3 cookies.
	Prepares several mystery boxes, each box with 1, 2, or 3 beads.	Looks quickly and names the number.
		Feels the beads in the box without looking. Names the number.
Number in Sets of 4 Objects	Places 3 cookies on a tray, one each for a group of children. Covers the cookies.	Names the number at once without counting as teacher uncovers these. (Teacher also names the number "3".)
	Arranges a patterned set of 3 objects and a patterned set of 4 objects, e.g., cookies for snacks.	Points to the set of 3 cookies. Names the number.
		Points to the set of 4 cookies. Names the number. Observes the set of 3 cookies. Notes the extra one. Observes the set of 4 cookies. Notes the twos.
	Patterns other sets of 3 small objects, and sets of 4 small objects: nuts, shells, wheels, pennies, spools, etc. Covers the sets.	Learns to identify and to name sets of 3 and sets of 4 objects.
	Arranges a set of 3 objects and a set of 4 objects.	Compares the number in the two sets - which has more, which has fewer, the number in each, how many more in the set of 4.
	Prepares mystery boxes, each with 2, 3, or 4 beads.	Looks quickly and names the number.
		Feels the beads and names the number.

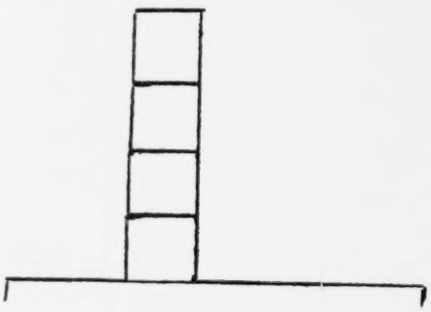
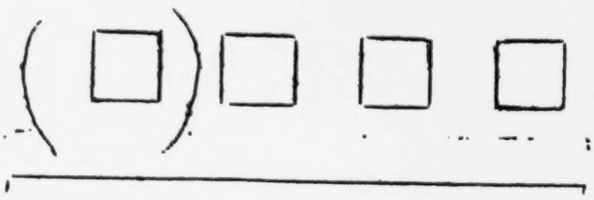
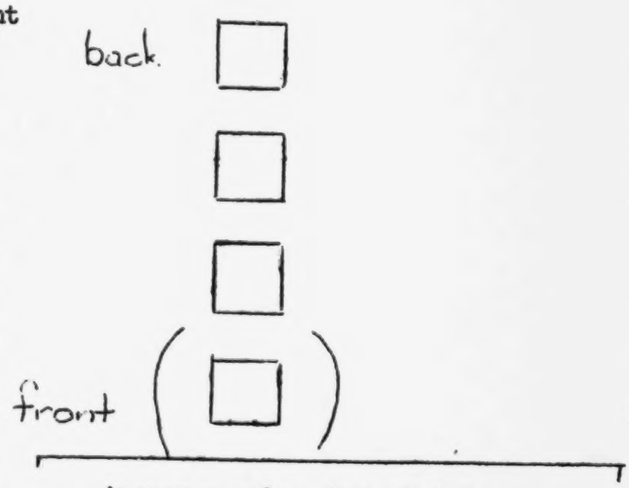
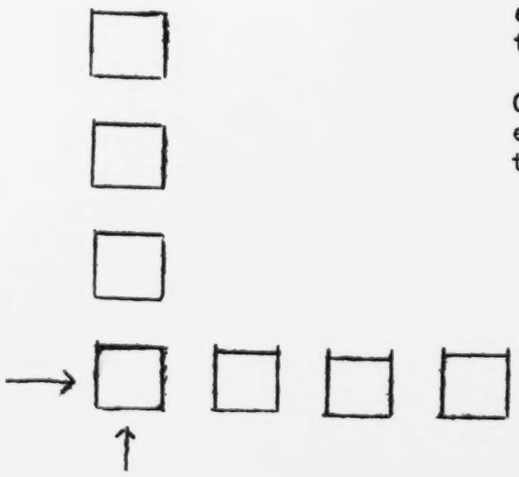
Content	Teacher Preparation	Pupil Activities
	Selects objects small enough to be held in one hand: beads, pennies, etc.	Guesses the number the teacher holds in hand. Names the number at once when teacher opens hand (no counting).
	Plans for a trip: school yard and neighborhood.	Observes and names number of swings, wheels on a car, traffic lights, puppies in a pet store window, etc.
Number in a Set in a Picture	Selects pictures containing sets of interesting objects: dogs, children, toys, etc.	Tells the number in each set named by the teacher.
Guessing the Number: Two or Three (Probability)	Selects several small objects to hold in one hand: 2 or 3 pennies, 2 or 3 beads, 2 or 3 checkers, etc.	Guesses how many objects - 2 or 3 - teacher holds in the hand. Names the number when hand is opened.
	Prepares a score card to record correct and wrong guesses, e.g.: :Correct Wrong: : / 0 : : / 0 : : / 0 : : / 0 : : etc. :	(Note: Teacher continues until both lists are the same length.) Notes that the number of marks is the same for correct and for wrong guesses.
Guessing the Number: Three or Four (Probability)	Selects objects to hold in one hand: 3 or 4 pennies, etc. Prepares score card.	Guesses how many objects - 3 or 4 - teacher holds in the hand. --Names the number when hand is opened.--- Notes number of correct and wrong guesses.
4. JUDGING AND FINDING THE NUMBER: COUNTING	(See "Suggested Experiences" and "Suggested Pupil Materials," p. 1.)	
Number Names in Order: Rote Counting	Selects or composes rhymes and jingles with number names in order, e.g.: 1-2. Buckle my shoe. 1-2-3. Climb the tree. 1-2-3-4. Close the open (or brown) door. 1-2-3-4-5. I caught a hare alive. Etc.	Repeats each rhyme after teacher says it. Marches in step as teacher repeats number names, e.g.: 1-2, 1-2, 1-2, etc. 1-2-3-4, 1-2-3-4, etc. Marches in step and repeats number names, e.g.: 1-2, 1-2, etc. Claps as he and the teacher say number names in a rhyme. Dramatizes the action of the rhyme.
	Brings to the classroom a clock with a large round face and 12 Arabic numerals.	Repeats one number name at a time after the teacher says it, beginning with 1. (Teacher points to the numeral as teacher, first, and then the child say the number name.)

Content	Teacher Preparation	Pupil Activities
Judging the Number in a Collection of 5	Collects 5 small rounded objects for a science collection, e.g., lima beans.	Judges how many lima beans there are.
		(Teacher tells child how many to observe, move, return, etc.)
		Looks for 2. Moves away 2. Inspects the 2. Names "2". Looks at the number left. Names the number left (3). Returns the 2 to the collection.
		Looks for 3. Moves away 3. Inspects the 3. Names "3." Looks at the number left. Names the number left (2). Returns the 3 to the collection.
		Looks for 4. Moves away 4. Inspects the 4. Names "4." Looks at the number left. Names the number left (1). Returns the 4 to the collection.
		Looks for 1. Moves away 1. Inspects the 1. Names "1." Looks at the number left. Names the number left (4). Returns the 1 to the collection.
		Judges and names the number in the collection (5).
	Collects 5 chestnuts, one-inch cubes (one color), wheels, etc.	Judges how many there are and proceeds as with lima beans.
		(Note: Each child needs many of this kind of counting experiences.)
Counting by Ones, Naming Numbers as Objects are Accumulated	Collects 5 small rounded objects, e.g., buttons, pennies, chestnuts, cubic beads, etc.	Judges how many there are.
		Counts the objects by ones <u>slowly</u>:
		Moves 1. Then says "1."
		Moves another 1. Touches <u>both</u>. Then says "2."
		Moves another 1. Cups all <u>3</u>. Then says "3."
		Moves another 1. Cups all <u>4</u>. Then says "4."
		Moves the last 1. Cups all all <u>5</u>. Then says "5."
		Counts other objects similarly, i.e., after each move he cups and names all of the objects he has moved up to that point.

Content	Teacher Preparation	Pupil Activities
5. GEOMETRIC CONCEPTS		(See "Suggested Experiences" and "Suggested Pupil Materials," p. 1-2.)
Spherical Objects	Collects spherical objects, e.g., ball, orange, onion, grape, beads of various sizes, etc.	Observes handles and tells differences between a ball and an orange. Observes, handles, and tells how a ball and an orange are alike. Observes, handles, and tells differences and similarities between a ball or orange and another spherical object. Etc.
Comparing Spherical Objects with Cylindrical Objects	Collects drums, cans, round boxes, jars, bottles, cylindrical dowels, jar covers, etc. 	Observes, handles, and tells differences between a ball and a can. Observes, handles, and tells how a ball and a can are alike. Observes, handles, and tells differences and similarities between a ball or orange and another cylindrical object. Etc. Puts on one tray all spherical objects. Observes and tells similarities. Puts on other tray all cylindrical objects. Observes and tells differences and similarities. Notes after handling many spherical objects that a spherical object, is "all around round." May show this or tell this. Notes after handling many cylindrical objects that a cylindrical object has 2 flat faces. (Teacher only asks for "another way they are different" or "another way they are alike.")
Rectangular Objects (Including Cubic Objects)	Collects rectangular objects, e.g., cubes, boxes, milk containers, rectangular blocks, rectangular beads (including cubes), cartons, rectangular dowels, etc.	Observes, handles, and tells differences between a cube and a ball. Observes, handles, and tells differences and similarities between a cube and a longer rectangular block. Observes, handles, and tells some characteristics of a cube, a longer rectangular block, a box, etc. Notes faces, number of faces, corners, etc.
Comparing Rectangular Objects with Cylindrical and with Spherical Objects	Places on a table a cubic block, a longer rectangular block, a can, a ball, etc. 	Observes, handles, and compares a rectangular block with a can. Notes that a can has two faces, one at the top and one at the bottom. Notes that the block has more than 2 faces, that it has one at the top and one on the bottom, one in front and one in the back, one on one side and one on the other side (6 faces).

Content	Teacher Preparation	Pupil Activities
		Notes that all cylindrical objects have 2 faces - one at the top, one on the bottom. Notes that all rectangular objects, including cubes, have faces at the top, bottom, back, front, loft, and right. Observes, handles, and compares a rectangular block with a ball. Notes that a ball has no faces.
Circles	Prepares materials for children to paint.	Paints circles.
	Draws a large circle on the floor. (Note: A circle is a curve, and not an object.) Arranges children's chairs in a circle. Draws circles of various sizes on the floor.	Observes the drawing of the circle. Walks on the curve. Observes formation of the chairs. Observes the circles, walks on these, compares sizes.
6. CONCEPTS OF CAPACITY; CONCEPTS OF ONE HALF	(See "Suggested Experiences" and "Suggested Pupil Materials," p. 2.)	
One Half of Bulk	Collects enough sand for each child in a group.	Judges how to divide a mound of sand into halves. Divides the mound of sand roughly into halves. Learns to use both hands to divide the sand into halves. Examines the two parts to see if they are about the same size. Adjusts the parts. Cups one half as the teacher points to it. Repeats "one half" after the teacher says this.
	Collects other materials: gravel, pebbles, fiber, etc.	Divides other materials into halves, judges the halves, names each half as "one half."
	Prepares play dough, clay, etc.	Divides play dough into halves, judges these, names each half.
Judging and Comparing Contents in Two Containers	Selects 2 jars of the same kind, i.e., same sizes and shapes.	Observes the jars. Notes that they look alike - same size, same shape.
		Judges how high the water will come for each jar to be one half full.

Content	Teacher Preparation	Pupil Activities
Judging and Comparing Contents in Two Containers (Cont.)	(In presence of children slowly pours water into the first jar until it is about one half full. Stops.) 	Watches as teacher pours into first jar. Tells teacher when it is one half full.
	(Continues to pour water into first jar.)	Notes that the first jar is more than one half full.
	(In presence of children slowly pours water into the second jar, markedly less than one half full.) 	Watches as teacher pours into second jar. Notes that the jar is less than one half full. Compares contents of both jars: First jar (left) has more water than the second jar. Second jar (right) has less water than the first jar. First jar (left) is more than one half full. Second jar (right) is less than one half full. Indicates what to do with the first (left) jar for it to be one half full.
	(Slowly pours some water out of first jar until it is about one half full.)	Observes pouring by the teacher. Tells when the jar is about one half full. Indicates what to do with the second (right) jar for it to be one half full.
	(Slowly adds water to second jar until it is about one half full.) 	Observes pouring by the teacher. Tells when the jar is about one half full. Compares contents of both jars: Amount of water about the same in both jars. First jar (left) is about one half full. Second jar (right) is about one half full.
One Half of Capacity of a Container	Collects containers, different sizes and shapes.	Takes a container. Fills it one half full. Observes contents of other children's containers. Judges which containers are onehalf full, more than one half full, or less than one half full.
7. NUMBER LINE CONCEPTS	(See "Suggested Experiences" and "Suggested Pupil Materials," p. 2.)	
Blocks Stacked	Provides enough one-inch cubes, different colors, for each child to have a number.	Stacks a number of cubes. Notes which cube is at the bottom. Identifies it by color. Calls this the first

Content	Teacher Preparation	Pupil Activities
		•ne after the teacher says this. Notes which cube is next. Identifies it by color. Calls this the second one after the teacher says this. Etc.
Blocks in Row: From Left to Right		Starting with a cube directly in front of him, arranges cubes horizontally from left to right. Notes which cube is first (left hand one). Identifies this by color and calls it the first one. (Teacher may say this first.) Notes which cube is second, etc. Etc.
Blocks in a Row: From Front to Back		Starting with a cube directly in front of him, arranges cubes from front (close to him) to back (away from him). Identifies the first (closest) cube by color and calls it the first one. (Teacher may say this first.) Identifies the second cube by color and calls it the second one. (Teacher may say this first.) Etc.
Blocks in Two Directions	Arranges cubes from left to right and from front to back, using the same first cube for both directions. 	Points to the first cube. Names it by color and calls it the first one. Goes from left to right naming each cube. (Teacher may need to name these first.) Goes from front to back naming each cube. (Teacher may need to name these first.)

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Feedback Sheet

Please indicate your reactions, detach and send on or before April 15, 1965 to:

Mrs. Rebecca A. Winton, Director
Bureau of Early Childhood Education
110 Livingston Street
Brooklyn, New York 11201

Do you agree with the Goals of the Program? (Check) Yes ☐ No ☐ In Part ☐

a) If Yes, what should be stressed?

b) If No, or In Part, indicate your suggested changes, modifications and additions.

(Use reverse side and/or additional pages as required.)

Submitted by _____
Name

_____ _____
Position License

_____ _____
Date School

Feedback Sheet for Creating an Environment for Learning

Please indicate your reactions, detach and send on or before April 15, 1965 to:

Mrs. Rebecca A. Winton, Director
Bureau of Early Childhood Education
110 Livingston Street
Brooklyn, New York 11201

Have you set up any centers of interest other than those included in this bulletin? If so, name and describe them.

Are there any centers of interest which you have combined? If so, how have you arranged the center to accomodate an additional activity?

What devices have you used for providing more space in the classroom?

Are there other materials and equipment which you would like added to the supply list? If so, describe them and if possible, give the name of the source from which they may be purchased.

(Use reverse side and/or additional pages as required.)

Submitted by _____
Name

_____ _____
Position License

_____ _____
Date School

Feedback Sheet for Evaluating Progress

Please indicate your reactions, detach and send on or before April 15, 1965 to:

Mrs. Rebecca A. Winton, Director
Bureau of Early Childhood Education
110 Livingston Street
Brooklyn, New York 11201

What method of evaluating the child's progress have you found most effective?

What means do you use to evaluate your methods of teaching?

(Use reverse side and/or additional pages as required.)

Submitted by _____
Name

_____ _____
Position License

_____ _____
Date School

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Feedback Sheet for Involving the Parents.

Please indicate your reactions, detach and send on or before April, 1965 to:

Mrs. Rebecca A. Winton, Director
Bureau of Early Childhood Education
110 Livingston Street
Brooklyn, New York 11201

If you have had particular success in involving parents in the pre-kindergarten program, describe the methods or activities you used.

What workshops, films, speakers, parties, programs etc. did the parents enjoy and find most helpful at group meetings?

What were your reactions to home visitation? What, in your opinion, was the reaction of the parents?

(Use reverse side and/or additional pages as required.)

Submitted by _____
Name

_____ _____
Position License

_____ _____
Date School

Feedback Sheet for Curriculum Areas

Please indicate your reactions, detach and send on or before April 15, 1965 to:

Mrs. Rebecca A. Winton, Director
Bureau of Early Childhood Education
110 Livingston Street
Brooklyn, New York 11201

The experiences in this bulletin are not intended to be all-inclusive. They are merely suggestive. It is expected that the teacher will use many other experiences suited to the particular needs and interests of her class. However, if there is any experience that you feel belongs in this bulletin, will you please describe it using the following outline.

1. Curriculum area in which the activity was used.

2. Concept, understanding or skill developed by the experience.

3. Materials and resources used.

4. Description of experience.

(Use reverse side and/or additional pages as required.)

Submitted by _____
Name

_____ _____
Position License

_____ _____
Date School